A Lecture
ON
INTUSSUSCEPTION.

DELIVERED AT THE WEST LONDON HOSPITAL POST-GRADUATE COLLEGE.

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Definition.

AN intussusception consists, in the words of John Hunter, in the passing of one portion of the intestine into another. Except in certain rare instances, and in the multiple intussusceptions of the death agony, with which we have no concern, this passage is always of the upper into a lower portion. It may occur in any portion of the bowel, and we thus distinguish enteric, enterocolic, and colic varieties; but in the absence of some definite cause—some abnormality, congenital or pathological—the great majority of these occur in the neighbourhood of the ileo-caecal junction. We shall later on discuss the causes of this remarkable circumstance.

Anatomy.

A simple intussusception consists essentially of three tubes embracing one another—the outer layer or sheath, the middle or returning layer, the inner or entering layer. The sheath is, as we shall see, actively engaged in swallowing the other two layers, which are entirely passive. The sheath is therefore called the intussuscipiens, the other two layers being together the intussusceptum. The end of the intussusceptum is called the apex, the upper end of the intussuscipiens is the neck. This is, of course, the simplest form of intussusception. Double and treble varieties are not infrequent.

Let us now examine in greater detail the three tubes or layers we have just defined. The peritoneal coats face respectively outwards in the sheath, inwards in the returning layer, outwards in the entering layer. The sheath and the returning layer have, therefore, their mucous surfaces in contact, and whilst this stimulates the sheath to contract, it renders adhesions between these layers most unlikely. The returning and entering layers, on the other hand, have their peritoneal surfaces in contact, and early adhesion between these layers may be expected. In fact, such adhesion in the neighbourhood of the apex, or oldest part of the intussusception, is almost invariable in acute cases of any standing, and may offer a serious obstacle to reduction. These two layers are therefore rightly grouped together as the "intussusceptum."

Causation.

Intussusceptions are produced by a perversion of the normal mechanism of intestinal propulsion. We shall therefore briefly describe the normal mechanism and then discuss the abnormal factors which may lead to this condition.

In the normal propulsion of food the latter acts as a foreign body, exciting by its contact with the mucous membrane a reflex contraction above and a reflex relaxation below. The circular fibres above contract strongly, driving the bolus onwards; the longitudinal fibres over the bolus at the same time draw up the intestine over it as a sleeve, taking their purchase from the fixed constricted ring above. Now, an invaginated portion of intestine will act as a foreign body, and will tend to be driven onwards by this normal intestinal mechanism. The primary occurrence of the invagination depends upon certain abnormal conditions.

Of these abnormal factors, by far the most important is prolapse of the mucous membrane at the ileo-caecal valve. It is not sufficiently recognized that in this region we have a thickening of the circular muscular coat of the last few inches of the ileum forming a detrusor, and terminating in a tonic ileo-colic sphincter, both exactly comparable to the corresponding structures in the rectum. It is therefore not surprising that prolapse of the mucous membrane at this point is common, and exactly as in rectal prolapses this "foreign body," embraced by the sphincter, will induce increased spasm, with congestion and swelling of the prolapse. But here the conditions diverge. A rectal prolapse projects into the air, and is largely increased by straining, being driven out by the resulting increase in intra-abdominal pressure. An ileo-caecal prolapse, on the other hand, projects into the large bowel, which grasps the swollen mass and endeavours to drive it onwards, whilst abdominal pressure, acting equally in all directions, has no power to either accelerate or retard its advance.

A second group of cases depend for their causation on growths, innocent or malignant, in the bowel wall, and on swollen Peyer's patches. The ordinary polypus is the commonest cause in this group, and giving rise, as it does, to symptoms resembling those of the intussusception it may induce, is apt to confuse diagnosis. As long as the surface of the polyp is covered by mucous membrane it is apparently without effect, but should it become ulcerated, contractions of the bowel are induced by its contact with the intestinal mucosa, and an intussusception may readily follow.

Finally, we have the inverted diverticula—Meckel or the appendix. The former is not uncommon; the latter exceedingly rare. The diverticulum becomes inverted, and projects into the bowel, an ulcer, thickening, or growth at its apex being frequently the primary cause of its inversion.

Varieties.

It is possible to divide up intussusceptions in an infinite number of ways, and the nomenclature which has been introduced for this purpose is astonishing. For the most part it is purely artificial and absolutely useless, for it is rarely possible, except at a *post-mortem* examination, to determine the exact class to which a case belongs. For practical purposes, as Fitzwilliams and Corner have pointed out, they may all be reduced to four types as follows:

1. *Enteric*, where small intestine is alone involved.
2. *Ileo-colic*, of ileum and colon.
3. *Ileo-caecal*, also of ileum and colon, but primarily headed by ileo-caecal valve.
4. *Colic*, of large intestine only.

Any of these may, of course, form the nucleus of a multiple intussusception, double, treble, and even more complex. But the form of the nucleus is alone of practical interest. The first and last groups are obvious, but the bulk of the cases occupy the second and third groups, and, to clearly understand the distinction between these, we must study the method by which an intussusception grows.

Method of Growth.

Growth takes place at the neck entirely. There is no exception to this rule. The apex soon becomes oedematous, stiff, and swollen, and once this has happened it is impossible for the apex to change. The driving force is supplied exclusively by the sheath. As in normal peristalsis, the circular fibres of the sheath contract strongly above, driving on the stiff intussusception and forming a fixed point from which the longitudinal fibres can act. These act in one of two ways. If the sheath is loose they pull it over the intussusception like a sleeve. If it is tight they drive the intussusception onwards into it. This is the only way in which an intussusception can grow, and, as Fitzwilliams points out, the old idea is untenable that the ileum as a whole can prolapse through the ileo-caecal valve with a changing apex, as the rectum can prolapse through the anus. The latter occurrence is dependent largely on intra-abdominal pressure, and bears no relation to the case in point. The only driving force is derived from the sheath.

How, then, do we account for the common ileo-colic form? It may occur in one of two ways. It may start as a true enteric intussusception, the initial cause being perhaps a small polyp or a swollen Peyer's patch. The point of origin remains, as always, the apex, but once the apex has passed the ileo-caecal valve and drawn through the end of the ileum, the result is anatomically identical with what would be found if a prolapse had occurred. Another method seems to be more probable, though so far as I know it has not been previously described. The mucosa of the termination of the ileum is by no means firmly attached to the muscular coat. It prolapses readily, as above described, and this prolapse will still further

loosen its hold in the neighbourhood of the valve. When, then, it becomes taut and can prolapse no further, it will drag upon the muscular coat and tend to intussuscept it, not at the valve, but at a point from one to two inches above. This exactly corresponds with what is actually found, for commonly the last part of an intussusception to be reduced (and therefore the first to be inverted) is at a point from one to two inches above the ileo-caecal valve. This is thus the natural result of the prolapse of mucous membrane through the ileo-caecal valve which we know to be so common.

The distinction between the ileo-colic and ileo-caecal forms has more than a mere academic interest, for in reducing an ileo-colic intussusception great difficulty occurs in the last stage in reducing the apparent ileal prolapse. In the rarer ileo-caecal form the valve is the apex, and there is no such apparent prolapse to deal with.

Pathological Changes.

We must next study the changes which occur in an intussusception as the immediate result of its development. The mesentery is dragged in between the entering and returning layers, and is subject to traction and to compression at the neck. At first it would seem that the drag on the mesentery must very soon bring the progress of an intussusception to a standstill. But it must be remembered that the mesentery is chiefly attached about the centre of the horseshoe formed by the great intestine, a fact which greatly modifies the elongation required; and also that in infants the peritoneal attachments of caecum and ascending colon are very incomplete, and that great mobility of these parts is the rule.

The effect of this drag on the intussusception is striking. It is forced into a curved form with the concavity towards the centre of the abdomen where the mesenteric root lies. The drag being entirely on one side, the orifice at the apex is dragged out into an elongated slit, whilst the apex itself is turned over and firmly pressed against the sheath. This change in the form of the orifice is probably responsible for the old idea that the apex was usually the ileo-caecal valve, especially as it was stated that the lips of the valve could be felt per rectum.

But of far more importance is the effect of tension and compression on the vessels of the mesentery. First the veins and lymphatics are obstructed, finally the arteries. As this occurs changes in the intussusception rapidly follow:

(*a*) There is marked oedema with extravasation of blood, especially at the apex. The glands of the mucosa take on an abnormal activity, and blood and slime appear in stools. The apex, and to a less extent the whole intussusception, become stiff and swollen, increasing the morbid activity of the sheath, and rendering reduction more and more difficult.

(*b*) The adjacent peritoneal surfaces of the entering and returning layers throw out lymph, which soon glues these surfaces together, this effect being also most marked in the oldest part—namely, at the apex—making reduction still more difficult.

(*c*) As soon as the arterial supply is cut off gangrene sets in. And now we are faced by a grave situation, for not only is the bowel obstructed, but it is occupied by a septic mass which must be removed if the patient is to survive.

(*d*) Its removal occasionally, but very rarely, occurs spontaneously, and the mass consisting of entering and returning layers is passed by rectum.

All these changes are more marked in the intussusceptum the middle layer especially suffering, whilst the sheath may be almost normal. Meanwhile the patient suffers not only from obstruction, but also from absorption of septic material from the damaged if not gangrenous tissues.

These characteristic changes are only seen, however, in the acute form of the disease. In the chronic form the peritoneal attachments have time to stretch, and consequently the pull of the mesentery is of much less importance. The contractions of the bowel are less violent, and may have little or no effect on the circulation. There is thus only slight swelling at the apex of the intussusceptum, and adhesions may be absent or be limited to this region. Severe oedema and gangrene only occur if the condition becomes acute.

Clinical.

In studying a large number of cases of intussusception we find that they fall naturally into two well-marked groups—the acute and chronic forms. These present, in almost every feature, a very remarkable contrast, and will require entirely separate discussion.

Acute intussusception occurs almost entirely in infants, and three-quarters of the cases are under 1 year. It presents an absolutely characteristic group of symptoms remarkably free from variation. As a rule no obvious cause for the condition exists.

Chronic intussusception, on the other hand, is rare in infants and occurs in children and adults. The symptoms are most irregular, and in at least 50 per cent. of the cases the diagnosis is anything but the correct one, varying from tuberculous peritonitis to new growths in the lung. In a large proportion of the cases a definite cause is discovered, such as a polypus or carcinoma. The clinical course of the two forms is in similar contrast, and the treatment involves very different considerations.

Acute intussusception occurs, as we have said, for the most part in young children: 100 cases, under 12, were distributed as follows:

Under 1 year	72
1 to 6 years...	22
6 to 12 years	6

(Fitzwilliams.)

Above 12 it is rare, and, when it does occur, usually is the result of some definite cause.

But when we come to examine the cases under 1 year an even more striking result appears. Of the above 72 cases, 46 (64 per cent.) occurred during the four months from the fourth to the seventh inclusive. During the first three months the condition is exceedingly rare. Taking again cases under 12 years, two other facts of great interest appear. First, the boys outnumber the girls in the proportion of three to one. Secondly, there is a definite seasonal variation in the incidence, with sharp rises in April and December, and a great fall in numbers between.

From these statistical observations Fitzwilliams makes the deduction that improper feeding is an important factor in causation. At the fourth or fifth month the child is weaned, and after that we know only too well the sort of diet on which it is expected to subsist. And as Easter and Christmas are seasons of adult rejoicing it is considered only fair for the infant to participate.

As three-quarters of these cases occur in infants under 1 year, and as these are of a constant and characteristic type, we shall now describe in some detail the symptoms and signs of this group.

Acute Intussusception of Infants.

The child is usually well nourished and in perfect health. It rarely occurs in a child the subject of colitis or summer diarrhoea. The sudden onset of this severe condition in a fat and healthy baby is most characteristic. As a rule it starts with a severe and sudden abdominal *pain*, coming on in acute attacks with intervals often of complete relief. The child may vomit, but never to any great extent. Tenesmus is a marked feature, the child straining incessantly, but only passing a little blood and slime. At first a motion or two may be passed, but after this there is absolute obstruction, and no trace of bile will be found on the napkin. This sign, which was first pointed out by Barnard, is almost infallible, and should in every case be part of a routine examination. The blood and mucus are exuded from the intussusception in sufficient quantity to soon clear the lower bowel of its contents, in view of the violent peristalsis which is occurring.

On examining the child in a typical case the abdomen will be fairly lax unless the child is actively straining. In the course of the colon a tumour may be felt. It has very definite characteristics:

1. It is in the region of the transverse or descending colon.

2. It gradually shifts its position, advancing along the colon and increasing in extent.

3. It is sausage-shaped and of horseshoe form, the concavity being towards the centre of the abdomen.

4. Manipulation causes it to contract and become hard. This hardening is accompanied by an attack of pain and an increase in the tenesmus. The characteristic feature

is that, although the tumour may not be very tender, and manipulation may cause no instant pain, the pain rapidly follows and continues long after manipulation has ceased.

5. The apex may be felt by rectum.

The presence of this tumour is the essential sign of intussusception, and it is probable that if proper methods are adopted it may be discovered in all cases. A few words as to the examination of an infant's abdomen may therefore not be out of place.

First try without an anaesthetic. Sometimes the tumour may be felt at once, for between attacks of pain the abdomen may be quite lax. Usually, however, the child begins to cry, and the examination is given up as hopeless. This is an entire mistake. The abdomen of a crying infant can be readily palpated if the surgeon has patience and skill. Every now and then the child must inspire, and for an instant the abdominal wall is absolutely lax. This is the surgeon's opportunity, and yet it requires a nice touch to obtain satisfactory results. The slightest roughness is met by instant rigidity. The hand must be felt to form part of the abdominal wall, and to move with it, and at the instant of relaxation, when the diaphragm also moves downwards, the hand should perceive objects moving into contact with it from inside rather than attempt to reach these objects by a sudden plunge. With these precautions, the abdomen of a crying infant can be deeply palpated with certainty.

In any case of doubt an anaesthetic should be given. This enables one to carry out a most important manœuvre, first suggested by Sir Frederic Eve—I mean a bimanual examination. A finger in an infant's rectum can, in conjunction with a hand outside, explore practically the whole abdomen. If after such an exploration no tumour is found, the case is probably not one of intussusception.

Contrasting with the tumour, a vacant space may be felt in the right iliac fossa—the famous Signe de Dance. It is the contrast between an empty and a full area that is of importance rather than the actual void itself. I would repeat that the abdomen as a whole is not rigid. Rigidity, apart from straining, and distension are signs that the case has gone too far for operation to be of any avail.

Let me recapitulate the cardinal signs of the acute intussusception of infants:

Pain, in sudden severe attacks.

Tenesmus and constant straining.

Blood and mucus in stools, and *no bile*.

Tumour, varying in consistency, increasing in size, advancing in position with each attack of pain.

Treatment.

The only treatment of intussusception is immediate laparotomy. Inflation by rectum is both useless and dangerous. Useless, because it rarely even appears to succeed, and because any reduction effected is almost always incomplete and rapidly recurs. Dangerous, because it increases shock, wastes valuable time, and may do considerable damage. It was only justifiable in the days when the mortality of laparotomy was cent. per cent.

Precautions are taken for the avoidance of shock, the child being wrapped in wool and placed on a hot-water pillow in a hot theatre. The abdomen is opened through the right rectus, slightly below the middle. Two fingers are introduced and the bulk of the intussusception rapidly reduced, with sometimes an assistant's finger in the rectum. The last few inches may resist reduction. This portion of the gut will now be opposite the wound, and can be readily brought completely outside the abdomen, where it is carefully protected with hot pads. The reduction of these last few inches is always the crux of the operation. The mass is grasped in the left hand and gently, but firmly, squeezed. It will gradually unroll at the neck. Very slight traction on the entering layer is permissible, and may be necessary in the last stage, especially in the ileo-colic form. But the pressure of the left hand is the essential part. This not only tends directly to unroll the neck, but squeezes lymph out of the swollen apex, and enables it to pass the more easily. The peritoneum will probably crack at one or more places, but this must be disregarded. Complete reduction is essential. Very often the arrival of the appendix indicates the end. Any cracks in the peritoneal coat are closed with fine silk. The abdomen is closed by through-and-through sutures of silkworm gut. The layers are too delicate for separate suture, and speed is essential. The after-treatment is simply directed against shock. Saline injections, either by rectum or subcutaneous, are started at once, and, if possible, kept up continuously. I would lay stress on the importance of the child receiving the fluid at a proper temperature (100°). Too often it cools in unprotected tubing, and is practically delivered as cold water. Adrenalin or pituitary extract are useful as accessories. Strychnine can only do harm, and should be entirely avoided.

But we may find that, in spite of every effort, the last few inches are irreducible, adhesions binding together the peritoneal coats or the apex being too large to pass the neck. This is a serious complication, for the continuity of the bowel must at all costs be restored. A faecal fistula is very unsatisfactory in an infant, and excluding, as it here does, the whole of the large intestine, is almost invariably fatal. Resection is attractive, but unjustifiable unless gangrene is present, for there is no recorded case of an infant under 1 year surviving this operation. Without any doubt, the best treatment is to bring the small and large intestines into apposition as close to the irreducible portion as is safe, and perform a lateral anastomosis. This relieves the obstruction and prevents a recurrence of intussusception. The irreducible part may gradually reduce itself, or may remain as a permanent condition, or the intussusceptum may slough away and be passed by rectum.

If the intussusceptum is gangrenous we have no choice but resection. In such a case Jessett's operation is probably the most hopeful, and certainly the easiest, to perform. A longitudinal opening is made in the sheath in a healthy region. Through this the intussusceptum is protruded till healthy tissue is reached. It is transfixed by two sutures at right angles and amputated. The sutures are divided so as to provide four sutures equally spaced round the stump and piercing all the coats. They are now tied and the stump returned into the sheath, which is closed by two layers of sutures. Two or three Lembert sutures may be inserted at the neck after as complete reduction as possible. In some cases direct resection with closure of the ends and lateral anastomosis may be more convenient. In an infant success is practically hopeless, though the attempt should be made, but after 5 years old several cases have recovered.

Intussusception in Children and Adults.

In studying cases of intussusception occurring after the first year of life we are at once struck by three features in which they contrast forcibly with cases in infants. In 70 per cent. of the cases a definite cause can be discovered; they tend to be chronic; the symptoms are irregular.

Causation.

In an extensive series of cases (Eliot and Corscaden) the following were found to be direct causes:

1. Tumours were found in 40 per cent. Of these 24 per cent. were innocent and included mucous polyps, fibromata, lipomata, submucous haemorrhages; 16 per cent. were malignant—carcinomata and sarcomata.

2. Ulcers were found in 14 per cent., and were due to typhoid, dysentery, and tuberculosis.

3. Meckel's diverticulum (inverted) was the cause in 12 per cent.—a very remarkable number considering the comparative rarity of this abnormality.

4. Trauma, such as a blow or a violent strain, was a definite cause in a few cases.

We have already discussed the manner in which these causes act.

Chronicity.

More or less acute attacks occur, with intervals during which the patient is free from any acute symptom and only complains of general poor health. The attacks become more frequent and severe as time goes on, but they may go on over a period of from a month to a year.

Symptoms and Signs.

Pain is always a prominent feature. At first the attacks of pain are sudden and severe, and may cease as suddenly as they began. As, however, adhesions form and tend to check the progress of the intussusception, the pain takes

on a different character, and its onset and cessation are both more gradual.

Vomiting occurs in two forms, which should be carefully differentiated. With the pain we have the bilious vomit due to dragging on the mesentery. Apart from pain, and in the later stages, we have the dark vomit of intestinal obstruction, with all the grave characteristics of that condition.

Wasting and anaemia are always marked, and frequently lead to a false diagnosis, such as tuberculous peritonitis or carcinoma.

Either constipation or diarrhoea may be present. The former is more usual in enteric intussusceptions; the latter occurs in colic cases, and is accompanied by the passage of blood and mucus.

A tumour is to be felt in the abdomen in most, if not all, of the cases. It presents the characteristics we have already described. In form it resembles a concave sausage. With each attack of pain it becomes firm, increases in size, and advances in position, following always the path of the colon. In 30 per cent. of all cases its apex can be felt by rectum. It is tender and manipulation brings on an attack of pain.

The abdomen is not distended till obstruction has become a marked feature. Emptiness on the right side and fullness on the left are frequently noticed and are very characteristic.

Such are the symptoms of a typical case, but they may occur in such masked form that diagnosis is practically impossible. Of 55 cases collected by Rafinesque, 27 were incorrectly diagnosed, and other writers give an even larger percentage of error. A patient with wasting, obscure attacks of pain, and an indefinite tumour presents a fairer picture of the average case, and suggests a wide field for diagnosis.

The *treatment* of these cases only differs from that of the acute infantile form in a few details. Laparotomy is as essential in the one as in the other, but here we are dealing with an older patient, and extensive operations can be successfully carried out. And we have the further incentive to resection that we can thus remove the *cause*, which so often is of a definite nature in these cases. Once the condition is suspected operation should not be delayed, for many cases terminate with startling abruptness in a few hours, and, in any event, operation during an acute exacerbation is a very grave proceeding. Spontaneous recovery is rare, for although cases where the intussusceptum has passed by rectum are not very common, the great majority of these have died.

I have only dealt with the leading features of a very wide subject. Those who wish to study it in greater detail will do well to refer to the papers I mention below. In these full references to the literature will be found.

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THE first State dental clinic for school children was opened in Vienna on March 13th.

ON January 15th, 1913, the total number of students in the medical faculties of France was 8,247. Of these 7,400, among whom were 803 foreigners, were men, and 847, of whom 358 were French and 489 foreign, were women. The schools as distinguished from faculties of medicine had 1,497 students, of whom 1,287, including 29 foreigners, were men, and 210 women, of whom 9 were foreign. The numbers for the several faculties were as follows: Paris, 4,211, as against 4,170 in 1912; Lyons, 1,055; Bordeaux, 751; Montpellier, 699; Toulouse, 346; Nancy, 306; Lille, 285; Algiers, 156. Among the medical schools Nantes stood first with 255 students; next came Marseilles with 245, and Rennes with 148. The others had numbers ranging from 52 (Limoges) to 220 (Grenoble). Of the foreign students the most numerous were the Russians, of whom there were 831. Of these 585 belonged to the Paris Faculty, and 133 to Montpellier. Next came the Turks, of whom there were 85; of these 68 belonged to Paris and 11 to Montpellier. There were 67 Bulgarians, of whom 20 were at Lyons, 28 at Montpellier, and 12 at Nancy. There were 59 Roumanians, of whom there were 54 in Paris and 5 at Montpellier. Among other nationalities represented were England (13), Greece (24), South American Republic (22), all studying in Paris.

REMARKS ON TRANSVERSE COLOSTOMY AS THE OPERATION OF ELECTION.

BY

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IN 1906, at a meeting of the old Clinical Society,[1] I ventured to draw attention to the question of the transverse operation of colostomy as opposed to the iliac method, and stated my belief that, of the two methods, the former was for many reasons the best. My views were at that meeting subjected to some criticism at the hands of certain leaders of the profession who had no better arguments to adduce than that the old iliac operation had always answered very well, that the control of faeces could not in the nature of things be so complete in the transverse operation, and that the length of colon excluded, being so much longer than that left by an iliac colostomy, could not but be a source of trouble.

I received these criticisms, coming as they did from such eminent authorities, in a somewhat chastened spirit, until on making inquiries I found that these gentlemen themselves had had very little more experience of transverse colostomy than I had myself, and two of them acknowledged that the question of anything better than the iliac method had never suggested itself to them. I therefore concluded that I had at least some ground for speaking on the subject.

Since that time I have continued to practise the operation of transverse colostomy as a routine method, and, judging from my own results, I have now very little doubt that the claims I put forward in 1906 were well founded; so much so that were I ever in the unfortunate position of having to undergo the operation of colostomy myself, I would stipulate most strongly for its performance by the transverse method, provided that the conditions permitted of its being done.

I am fully aware of the fact that the cases I have operated upon are not so numerous as to command the attention of surgeons who will never condescend to consider anything less than four-figure statistics, nor of those members of the profession who, being attached to the staffs of hospitals dealing solely with rectal conditions, are perhaps apt to look upon the work of others in their special domain as that of the unauthorized. It is not to such that I propose to address myself, but to those who, like myself, being attached to the staff of a general hospital, while dealing with a smaller number of such cases, have, from the varied nature of their work, developed a wider and perhaps more broad-minded outlook on surgery generally. I do not propose for a moment to attempt to defend the operation of colostomy, or make it out to be anything better than an unfortunate, and usually solitary, alternative to a very dreadful and necessarily fatal condition; it should never under any circumstances be performed if any better way out of the difficulty can be found; but that it merits the expressions of loathing and horror that are so frequently heaped upon it by those who have not stopped to consider its purposes, its results, and its surgical technique, I would most strenuously deny. Nothing is further from the truth than to say, as I have often heard said: "Better be dead than have a colostomy done."

It was with much interest and serious reflection that I read Mr. Paul's most excellent opening address in surgery at the meeting of the British Medical Association at Liverpool,[2] and while I realized that any statement coming from so well-known and famous a master of his craft as Mr. Paul must be accorded an attentive hearing, I must confess to no small measure of astonishment that not only does he advocate the lumbar route (which has long been considered obsolete) as a better method than the iliac, but that he refuses any place to transverse colostomy, and openly advises that it should never be performed. With all respect to Mr. Paul I would submit reasons why iliac and lumbar colostomy are not and cannot be in any way comparable to transverse colostomy, which, after practical experience, I have come to regard as the method *par excellence* from every point of view.

If we are to arrive at the ideal we must first of all have

a clear conception of what we consider the ideal—that is to say, what are the requirements which should be fulfilled by a really good colostomy? They may be stated as follows:

1. Good sphincter control.
2. Firm support for belt and plug.
3. Freedom from prolapse.
4. Accessibility.
5. Good spur formation.
6. Removal to a distance from the site of growth.

If these points are considered separately, I think it can be shown that the iliac operation—and what applies to the iliac will also apply, in some points more and in some less, to the lumbar—is singularly deficient in all of these desiderata, whereas the transverse operation has many advantages and few objections.

1. *Good Sphincter Control.*

Control of faeces in the absence of a *natural* sphincter depends on four conditions:

1. Elimination of the influence of gravity.
2. The formation of the most effective artificial substitute that can be devised for the natural sphincter.
3. The assistance of this artificial sphincter by a really efficient plug and belt.
4. The careful regulation of the diet and bowels in all colostomy cases.

In none of the first three of these points does the iliac operation satisfy our requirements. The best result obtainable is always marred by the imperfection of the control, and from time to time, sometimes unfortunately constantly, the patient is harassed by the extravasation of faeces when he is up and about, his life being rendered a misery to him by the constant necessity for repeated cleansing, and the unavoidable odour about his person. The reasons are not far to seek. The vertical position of the descending colon allows of a column of faecal matter accumulating above the colostomy opening, every fresh addition as it passes the splenic flexure increasing the weight of the column and the pressure on the artificial sphincter; thus the slightest exertion on the part of the patient tends to force this column past the sphincter, the influence of gravity being thus a very important factor.

2. *Firm Support for Belt and Plug.*

If this pressure is to be resisted, it must be met by a very efficient sphincter and a very efficient belt and plug. But what do we find? A sphincter made of the worst material and in the worst possible situation, and in a situation ill-suited to the requirements which the belt is expected to fulfil.

Now in iliac colostomy the sphincter may be placed in one of three positions, according to the length of meso-sigmoid.

(*a*) In the substance of the oblique muscles.
(*b*) In the linea semilunaris.
(*c*) In the substance of the rectus muscle.

The first of these positions is that of the old method; it brings the opening too close under the vertical column of the descending colon; it is deficient in aponeurotic backing; and it is too close to the anterior superior spine of the ilium, with the result that when extravasation repeatedly occurs in elderly and thin people the skin over this prominence becomes macerated, and being rubbed by the belt, breaks down, and a painful ulcer, not unlike a bedsore in its intractability to treatment, is formed. Moreover, the action of these muscles is not particularly powerful at this point.

The second position is hopeless; the abdominal wall here is thin, aponeurotic not muscular, and the position has nothing to recommend it.

The third position is the best, but it is a long way from any fixed support; there is no aponeurotic backing, since the posterior sheath of the rectus muscle ends at the semilunar fold of Douglas; and this is the thinnest and weakest part of the rectus muscle. How do these positions suit the application of the belt? The belt to be efficient must have sufficient purchase to bring pressure on the opening. In all of these positions the alae of the pelvis are too widely separated to permit of this purchase, the abdominal wall, especially mobile at this point, simply giving to the pressure applied, and in this position a tight belt is not easily borne. Moreover, the slope of the loins and the prominence of the hips constantly tend to make the belt "ride" upwards, and this necessitates the use of perineal straps if the belt is not to be quite useless; and this is especially so in women.

The fitting of a plug to a colostomy opening in any of these positions is also unsatisfactory, for to be efficient it must fit tightly without overstretching the opening or causing pain; and, although patients do not usually complain of the latter, the tendency of the opening to stretch is undeniable, since the muscle layer through which the bowel comes is lacking in aponeurotic support behind, and has only a comparatively feeble layer in front. The result is that frequently the plug has to be changed for a larger one in order to control the discharge of faeces, and ultimately the margins of the opening may become so flaccid that prolapse is favoured.

3. *Freedom from Prolapse.*

The comparative frequency with which this is seen in iliac colostomy is a strong point against the operation. It is true it does not occur in *every* case, but it occurs in certain cases, no matter how carefully the operation may have been conducted. One of the causes of the trouble has already been given; the other is again the effect of gravity; the conversion of the upper portion of the sigmoid into a receptacle subjecting it to dilatation, and the pressure of the vertical column of faeces in the descending colon bringing about a slipping down of the mucous membrane, if not actually of the bowel itself. I have more than once seen as much as 6 to 7 in. of bowel and everted mucous membrane protruding from the colostomy opening. Such prolapse is greatly aggravated by any excessive activity of the bowel, as from purgatives and irregularities of diet, of which it may, indeed, be to some extent the result.

4. *Accessibility.*

Although an iliac is more accessible to the patient than a lumbar colostomy opening (indeed, the latter could hardly be less conveniently placed), it is nevertheless in an awkward position, especially in stout patients with protuberant abdomens, since it tends to become overhung by abdominal fat. Again, when an action is intended, it does not permit of the placing of a receptacle over the opening *while the patient is in the sedentary posture*, unless the body is maintained upright, which position greatly lessens the purchase of the abdominal muscles for defaecation, and brings an undue strain on the inguinal regions.

For the comfort of the patient a colostomy opening should permit of accessibility both for cleansing and defaecation.

5. *Good Spur Formation.*

Some surgeons have denied the desirability of a double opening to a colostomy with a spur between, and maintain that the distal opening is bad because it catches any faecal matter which may pass the spur.

Personally I do not agree with this, and would always recommend a double opening and a good spur being made. If the operation is properly done and the plug fits snugly, nothing will pass the spur; and in cases of advanced rectal cancer it is a very great comfort to the patient to have the excluded loop of bowel washed out and cleansed of stinking débris and blood clot; and at times the pain may be much lessened by the introduction of various analgesic drugs. With a single opening, this could not be done. The idea that the excluded tract harbours a great quantity of secretion is entirely erroneous: it rarely harbours anything but a small quantity of the débris mentioned; but, if it did, surely the worst that could be done would be to shut it in by occluding the opening and compelling the bowel to absorb it, or pass it over the raw surface of the ulcer—the surest method of increasing the patient's anaemia and pain.

6. *Removal to a Distance from Site of the Growth.*

I have seen certain cases in which the proximity of a growth high in the rectum rendered the iliac operation difficult so far as carrying the bowel over towards the rectus muscle is concerned, the outer of the three positions having to be chosen. As the difficulty was caused by thickening and shortening of the meso-sigmoid, it is obvious that the iliac operation was unsuitable in these cases; in one of them the growth subsequently invaded the colostomy opening.

Thus it will be seen that iliac colostomy has little to recommend it, and a close comparison between the points above mentioned and those same points when applied to transverse colostomy will, I think, show the latter operation in a much more favourable light. The anatomical position of the transverse colon at once disposes of the effect of gravity in promoting extravasation; indeed, it does more, for since of the fixed points—the splenic and hepatic flexures—the former occupies a higher position, the colon passing between them, lying in the position of a hammock, it is clear that the passage of the faecal mass towards the stoma will, if this be placed to the left of the middle line, be accomplished *against* the force of gravity, consequently neither extravasation nor prolapse are likely to occur. I have never seen either of them in my own cases when once the belt and plug had been fitted; and with regard to prolapse Allingham has said, "Prolapse might happen, but we have not yet seen it, and it would scarcely be so likely to occur as in other places, for the transverse colon is in a way fixed at its hepatic and splenic flexures, and would thus tend greatly to prevent prolapse of the gut through the transverse opening."[3]

The portion of the bowel between the stoma and the hepatic flexure, from its position, acts as a receptacle, which, like the rectum, can be conveniently voided from time to time, and it is very remarkable to see the excellent control patients ultimately acquire over this act, the bowels being opened night and morning with great regularity, the patient gradually becoming aware of the need to void the contents of the colon. Such perfect control I have never seen in any case of iliac colostomy.

The sphincter provided for the stoma is as nearly perfect as anything can be. The opening should be made two inches to the left of the linea alba, and the same distance below the costal margin. There are excellent reasons for the efficiency of the sphincter when made at this point. The rectus muscle here is thicker and stronger than below the umbilicus, thus forming a deeper and firmer canal; it is reinforced *in front and behind* by powerful fibrous aponeuroses, which tend to moor the stoma in place. This anchorage is further strengthened by the linea alba internally, and the lineae transversae, one of which should fall above and one below the stoma. Owing to the shorter fibres of the rectus lying between these latter, the grip of the "sphincter" at the stoma is much more efficient than in the iliac operation.

The situation is admirable for the fitting of a belt; for not only are the loins here of a shape to hold the belt without slipping, thus doing away with braces, bands, etc., but a degree of pressure can be supported here with comfort which would be impossible below the umbilicus, this pressure being rendered possible by the presence of the costal margins and the presence of liver and the firm nature of the abdominal wall here.

Prolapse I have already dealt with; I have never seen it occur in any of my cases.

The position of the transverse colostomy opening renders it extremely easy for the patient to cleanse and care for it; no matter how obese he may be, the opening is never overhung by fat, as may be the case with iliac colostomy. The skin here is thick and not easily excoriated by the moisture of the mucous membrane. The evacuation of the bowels is most simply accomplished, for it can be performed in the sedentary attitude, the body being inclined forwards and a receptacle placed over the stoma. Owing to the depth of the intramuscular canal and the length of the mesocolon here, an excellent spur can be made when the operation is done by Maydl's method. That this spur is *always* better than that of an iliac colostomy I do not claim, but I have already given my reasons for the occasional defects in the spur formation in the latter, which defects are invariably absent in the transverse operation.

Besides this latter question of spur formation, removal of the colostomy to a distance from the site of the growth offers one other great advantage; there is no little doubt that the offensive odour of a colostomy is largely due to the proximity to and the ease with which the foul débris of an ulcerating growth is discharged from the iliac opening. I have seldom, if ever, known a transverse colostomy to be in the least offensive, but I have never known an iliac one that was not.

There is one other point in which transverse has a great advantage over iliac colostomy—that is, in cases of intractable fistulae of the rectum and anus, where a cure has been effected by temporary colostomy; the ultimate reconstitution of the colon is effected far more easily and far more safely and certainly in the case of the former than in that of the latter operation.

I have then endeavoured to lay out the points which to my mind support strongly the adoption of this method as a routine practice; and finally I would consider the objections that have been raised by certain surgeons to its performance.

The objection has been made that the subcostal position of the stoma is a more unpleasant one for the patient. I can only reply to this that none of my own patients have ever complained on this score; and the greater cleanliness and better control which this position gives goes far to overcoming this objection.

Again, it is contended that control *must* be more difficult, since the motions in the transverse are more fluid than in the descending colon. This I can answer from my own experience: it is a purely theoretical objection; there is so little difference in the contents of the two sections that there is nothing to choose between them. It is quite obvious that the life of a patient, no matter of what variety his colostomy may be, can never again be regarded as normal. That is to say, he must always so regulate his diet and fluid intake as to favour constipation rather than diarrhoea, and so keep the excreta as firm as possible.

Mr. Paul has made the objection that the position is not a good one in view of the possibility of a subsequent laparotomy; neither is any colostomy, iliac, lumbar, transverse, or caecal. But since these operations are commonly reserved for patients who are already doomed, the prospect of their ever having to undergo such laparatomy must be very small indeed. Case xv is an exception—the only one I have come across in my practice.

Lastly, an objection from one of the highest authorities on rectal surgery made to me personally, is one which I mention merely to show the extraordinary attitude so often assumed by certain surgeons who, because they cannot themselves see any good in a new method, would deny the possibility of its existence, when expounded by others. It was that "iliac colostomy having served its purpose for so many years, there did not appear to be any obvious reason why it should be abandoned." On such an objection I leave the more progressive of surgeons to pass their own criticism. My cases are, as will be seen, comparatively few, and this is accounted for, first, by the fact that I have only used those of which accurate notes have been kept, many being hospital cases of which the notes have been found worthless, or have actually been mislaid; and, secondly, because I have never submitted any patient to colostomy who could by any means be safely tided on to the end without it; thus I have often avoided the operation where, with less trouble or more precipitate action, I might have performed it.

CASE I.

M. C., aged 60, married; has had three children; advanced carcinoma of second part of rectum; iliac colostomy by Maydl's method; bowel opened on third and divided on fifth day. Belt fitted on twenty-seventh day.

Patient survived eight months. Control seldom complete, and extravasation occasionally troublesome; complained much of her condition. Towards the end prolapse of mucous membrane with every evacuation, manual reposition being necessary. Could never leave her house for any length of time. Painful excoriation about anterior superior spine, she being a thin woman.

CASE II.

E. J., aged 52, married woman; three children; very stout; advanced carcinoma of first part of rectum with secondary deposits in liver, and malignant ascites. Iliac colostomy by Maydl's method; bowel opened on third and divided on fifth day. About an hour after division the divided ends suddenly receded into the abdomen. Laparotomy immediately performed, Paul's tubes in either opening; abdomen sponged out and drained.

Patient died forty-eight hours later from shock. The conclusions to be drawn from this case are that the fifth day is dangerously early for the division of the bowel; and that when ascites is present it is especially so, since the oozing of ascitic fluid between the bowel and the wound margins results in delay in the formation of plastic adhesions. Since this case was done I have made it a rule never to remove the rod or divide the bowel before the tenth day.

CASE III.

E. P., aged 18, unmarried girl, with a fistula in the left iliac region, following the opening of an abscess resulting upon left salpingo-oöphorectomy performed by another surgeon. Every means had been tried in hope of closing this fistula without success. Transverse colostomy by Maydl's method done, with a view to resting the fistula and allowing it to close. Bowel opened fifth day and divided on tenth.

Result excellent; control perfect; no extravasation or prolapse. Although discharge from fistula not entirely stopped, latter reduced to fine probe sinus at end of ten weeks. Patient, when apparently in perfect health at end of three months, and while waiting for reposition of colon, was suddenly taken with signs of acute intestinal obstruction. Operation was refused by her parents and she died unrelieved. *Post mortem:* Ileum caught by the loop of a fine adhesion, stretching from right psoas muscle to umbilicus. Colon below the stoma shrunk to diameter of little finger. Fistula track Y-shaped and leading to both sigmoid and small intestine, 4 in. above ileo-caecal valve.

CASE IV.

J. B., aged 50, widow. Advanced carcinoma of second part of rectum. Much ulceration and bleeding and great pain, defaecation causing agony for one or two hours. Iliac colostomy by Maydl's method resulted in very great relief, the bowel being opened at end of forty-eight hours and divided on tenth day. This patient lived five months. Control was never complete, and extravasation, in spite of repeated fittings of belts and plugs and careful dieting, caused her much misery, and she was practically bedridden owing to this from the time of her operation.

CASE V.

F. D., man aged 25, admitted for intractable chronic dysenteric ulceration of rectum; his motions being mixed with blood and mucus, and defaecation being accompanied by intense aching pain. Patient rapidly going downhill. Transverse colostomy by Maydl's method resulted in complete cessation of pain and great improvement in general condition. At the end of a year patient, finding his control so good and colostomy so satisfactory, refused to have the colon replaced. Owing to the fear of a fresh outbreak and of the formation of a stenosis of the rectum which even now threatened, this was not pressed. Two years or more after his operation this patient contracted pulmonary phthisis, of which he died.

CASE VI.

K. C., woman aged 55. Advanced carcinoma of rectum, involving second part high up, threatening obstruction, nothing but fluid motion passing; tenesmus and dragging pains; blood in motions; discharge very foul. Iliac colostomy by Maydl's method; meso-sigmoid thickened and very short. Bowel opened in forty-eight hours, and divided on tenth day. Subsequent control very difficult, owing to slipping of belt, she being small in the waist and wide in the hips. Complained much of the discomfort, and never could regulate her actions sufficiently to trust herself out of doors; consequently had to lead the life of an invalid to the end, which came eight months after operation. There was always a tendency to prolapse, moisture, excoriation, and foul discharge from the distal stoma.

CASE VII.

H. B., aged 45, suffering from faecal fistula through old laparotomy scar and stenosis of rectum. Six months previously patient had apparently undergone operation for pyosalpinx; this was followed by pelvic peritonitis, the formation of an abscess which burst into the rectum, and a second one which burst through the old wound and very soon discharged solid faecal material. Several attempts were made to close this sinus without avail, nearly all her excreta passing through it. It was then found that the rectum passing through a mass in the pelvis was tightly stenosed. Transverse colostomy by Maydl's method. Belt fitted at end of three weeks. Patient is alive and well eight years after operation. She tells me she has no difficulty whatever with the colostomy. Her control has always been so perfect that she can frequently leave off the belt. She knows exactly when the bowel requires evacuation, and has trained herself to do this morning and evening. She has never had prolapse, and only on one or two occasions has there been the least tendency to extravasation when she has taken a purgative. She does not experience any unpleasantness from the high position of stoma, and finds access to stoma much easier than it was to the old fistula, which closed entirely six or seven months after operation. The patient has been so perfectly comfortable that she has carried out her work for the past seven and a half years without any difficulty.

CASE VIII.

K. B., 47, sent to me by Dr. Sidney Beauchamp for the cure of an umbilical hernia. During convalescence was discovered to be suffering from carcinoma of rectum. Seen in consultation with Mr. (now Sir Anthony) Bowlby and Mr. (now Sir Alfred) Pearce Gould, who advised against excision. Transverse colostomy done by Maydl's method. Bowel opened on fifth and divided on tenth day. Belt fitted twenty-fourth day. This patient travelled to Devonshire at the end of the fifth week, and dined the same night in evening dress with her family. This she continued to do, leading her ordinary life and frequently motoring many miles in the day, to within four months of her death, which occurred over three years from the time of her operation. So satisfactory was her condition throughout that none of her household except her husband knew that such an operation had been done. She wrote to me many times saying how perfectly satisfactory she found the colostomy.

CASE IX.

P. C., married woman, aged 49. Advanced carcinoma of rectum in the second and third part, with secondary deposits in the liver and sacral glands. Could only pass flatus and fluid. Great pain and tenesmus, and occasional distension and partial obstruction. Linen always stained with foul bloody discharge, the sphincter ani being quite inactive. Transverse colostomy. Bowel opened at once on a Paul's tube and divided tenth day. From time of operation bleeding, discharge, and pain ceased entirely, and patient began to sleep well at night. She lived for fourteen months. During this time her colostomy worked perfectly. In less than two months she had almost complete control. From this time she never had the least difficulty; there was neither extravasation nor prolapse, and she herself said that had she realized how little inconvenience she was to have she would not have hesitated so long to have the operation done.

CASE X.

D. M., man aged 61, admitted with signs of acute intestinal obstruction, no obvious cause being present. Colon distended as far as the splenic flexure. Symptoms had been present for three days, and patient was very ill and feeble. Transverse colostomy was performed and a Paul's tube inserted. Immediately an enormous quantity of flatus and faeces passed, and patient was relieved. Four days later he again began to vomit and become distended, and although the signs were obviously those of general peritonitis, he was too ill to undergo any further operation, and died on the sixth day. *Post mortem* was found general suppurative peritonitis resulting from a perforating ulcer of the ileum just above the ileo-caecal valve, due probably to the preceding distension.

CASE XI.

J. A., married woman, aged 71. Advanced cancer of the sigmoid colon, chronic obstruction becoming acute. Patient very feeble. Refused operation till third day of vomiting, and then accepted. Transverse colostomy. Patient unrelieved, and died of ileus on the second day.

CASE XII.

M. L., married woman, aged 62, under care of Dr. Donkin of Bexley. Exactly similar case to the above, the obstruction being acute. Transverse colostomy: bowel opened at once, a large amount of faeces and flatus escaped. Union, however, was defective, probably owing to debilitated condition of patient, and leakage occurred into the perineum, causing patient's death from general peritonitis on the tenth day.

CASE XIII.

E. W., married woman, aged 47, under care of Dr. R. T. Smith. Carcinoma of uterus. The whole pelvis appeared to be filled with a mass of growth, the rectum being almost completely obstructed. Transverse colostomy. Bowel opened third and divided tenth day. Belt fitted twenty-fourth day. Patient died more than two years later. From the time this patient received her belt, she had no difficulty in controlling her motions with the usual restriction as to diet, she remained comfortable up to the end, the bowels being opened night and morning; there was neither extravasation nor prolapse.

CASE XIV.

J. D., man aged 41. Carcinoma of rectum in second part, with secondary deposits in liver and glands. The patient was so ill and wasted that the question of operation was deferred, but as obstruction threatened, and he began to vomit, an iliac colostomy was done. The sigmoid mesocolon was found much contracted, and the bowel was rather tense when the rod was passed beneath it. It was opened as in the last case, but the result was negative, little or nothing but flatus passing; the vomiting, however, ceased. As it was clear that there was some obstruction higher up, it was thought unwise to open the tranverse colon, and therefore a caecostomy was done. This relieved the patient, who, however, died of asthenia on the fifteenth day.

CASE XV.*

B. C., married woman, aged 42. Carcinoma of sigmoid. Laparotomy. No secondary deposits found; growth quite free. Growth with meso-sigmoid eventrated and fixed in position of iliac colostomy. Proximal loop opened on fifth day, the whole mass being resected on fourteenth day, leaving the parts in the condition of iliac colostomy. The patient is still alive and well five years after operation, but has always had great difficulty in controlling her bowels. She can never depend on her belt although many varieties have been tried, and lately she has suffered from prolapse; her skin is consequently often tender and excoriated, and she has to allow herself to become constipated in order to be able to do her housework. She is at present considering the question of transverse colostomy in order to obtain relief. A year later I removed this patient's appendix, obtaining a primary union in spite of the colostomy.

* Since this paper was written this patient has undergone two further operations, first for a non-malignant tumour of the right ovary, during which operation I did away with the lower colostomy opening by implanting the rectum into the transverse colon; and, secondly, for closure of the upper colostomy opening. This patient is still in hospital, but is doing well and is passing everything per rectum. She shows no sign of any return of her growth.

CASE XVI.

S. C., married woman, aged 20. Extensive carcinoma of the whole abdomen, probably commencing in the pelvis. Early acute obstruction. Transverse colostomy. Colon found so bound down and the mesocolon so infiltrated that it could not be brought over the rod; it was therefore stitched to the skin margin and a Paul's tube inserted. Patient was relieved of vomiting and pain, but the absence of a spur permitted a good deal of faecal matter passing beyond to stoma. Patient died of exhaustion a fortnight later.

CASE XVII.

J. V., man aged 60. Carcinoma of third part of rectum and anus. No obstruction, but great pain and bleeding on defaecation; some small glands in both inguinal regions. Transverse colostomy by Madyl's method and removal of all inguinal glands. Bowel opened fourth and divided on tenth day. Excision of rectum and anus four days after colostomy by direct route. Patient is alive and well three years after operation. He has never had the least trouble with the colostomy, and has excellent control, knowing at once when the bowels require relief. Tells me he frequently discards his belt in the hot weather, as he never suffers from extravasation or prolapse. There is at present no sign of recurrence.

CASE XVIII.

M. H., 69, married woman. Under care of Dr. Sidney Beauchamp. Patient had an umbilical hernia, with symptoms of intestinal obstruction, which were thought to be the result of it. At operation no strangulation was found but a narrow ring cancer of the splenic flexure. Transverse colostomy by Maydl's method. Bowel opened on table and divided on tenth day. Patient relieved; good recovery. Patient lived eighteen months. Up to last two months of her life she had no difficulty whatever with her bowels, the belt being comfortable and controlling the motions perfectly. During the last two months the growth invaded the abdominal wall and broke down, an abscess discharging beside the stoma. This ceased to discharge for some time, but again broke down, and ultimately the patient died of asthenia. Had this patient not been so aged and corpulent, the case would have been better served with an ileo-sigmoidostomy.

CASE XIX.

L. C., married woman, 57 years of age. Inoperable carcinoma of rectum in the second part. Admitted with acute obstruction, vomiting, and distension. Patient very ill, and transverse colostomy done simply to relieve distress, bowel being opened on table. Immediate recovery took place and colostomy worked well, but patient died of perforating ulcer of caecum on the eighth day.

CASE XX.

M. S., married woman, aged 57. Inoperable carcinoma of sigmoid. Patient going gradually downhill with bleeding, pain, sleeplessness, and recurrent obstruction. Transverse colostomy by Maydl's method. Bowel opened third and divided tenth day. Bleeding and pain ceased almost entirely. Patient obtained complete control as soon as belt was fitted, and although more or less an invalid owing to her weakness, was able to get about with comfort for months after her operation, and was still alive when seen twelve months from that date. There was never either extravasation or prolapse, and patient expressed herself as perfectly comfortable.

CASE XXI.†

R. C., man aged 57, suffering from carcinoma of second part of rectum, with bleeding, pain, and incontinence of faeces. Growth was removed by abdomino-perineal excision. Transverse colostomy done by Maydl's method as a preliminary operation. Bowel opened in forty-eight hours and divided tenth day. Patient, in spite of *Bacillus coli* infection of superficial layers of abdominal wound, made an excellent recovery. He has never had any difficulty with his wound and has done his work without discomfort, extravasation, or prolapse for nearly two years, and says he is very satisfied with his operation. There is no sign of recurrence.

CASE XXII.

S. S., man aged 65, suffering from malignant growth of transverse colon at junction of middle and left third. Laparotomy done at site of transverse colostomy and growth found slightly adherent to stomach and omentum. The whole mass with its mesocolon eventrated and fixed outside abdomen. Bowel opened on fifth day and whole mass resected on fourteenth day, leaving him with the condition of a transverse colostomy. It is now two years and eight months since his operation, and he is alive and well; he has done his work regularly since convalescence, and so satisfactory has his colostomy proved that he tells me he has "discarded his belt as he has perfect control without it, and never uses it 'unless he has taken a purge.'" In spite of the absence of the belt there is no prolapse. He wears a pad of cotton-wool over the stoma to protect it.

CASE XXIII.

F. J., man aged 41. Similar case to No. 21; transverse colostomy preliminary to abdomino-perineal excision of rectum. Patient unfortunately suffered severely from *Bacillus coli* infection owing to the tearing away of growth in the pelvis, where it was slightly adherent to the sacrum. He died on the fourth day.

† This patient has died of a recurrence since this paper was written.

CASE XXIV.

E. S., married woman, aged 62. Extensive inoperable carcinoma of second and third parts of rectum, with enlargement of liver and secondary glands. Transverse colostomy by Maydl's method. Bowel opened fifth and divided tenth day. Patient had perfect control and lived three months without discomfort or prolapse. Bowels were moved morning and evening. She died of asthenia.

CASE XXV.

M. M., married women, aged 60. Similar case in all respects to the above, and equally satisfactory; neither extravasation nor prolapse, and patient is alive and able to get about without discomfort.

CASE XXVI.

J. W., unmarried woman, aged 57, sent to me by Dr. Donkin of Bexley. Carcinoma of second part of rectum, no glands and no enlargement of liver. Transverse colostomy done as preliminary operation to abdomino-perineal excision of rectum, the two operations being done under spinal analgesia, with the exception of forty minutes light chloroform anaesthesia. Sixteen months since operation, patient well and no sign of recurrence. Colostomy works well, and with belt she has complete control, is comfortable, has no trouble with her bowels, and is able to get about as well as ever. She expresses herself as being very pleased with the result of operation.

Thus of these 26 cases 20 have been done by the transverse and 6 by the iliac method. Of the former 3 were done for non-malignant and 17 for malignant conditions. Of the non-malignant 1 died of strangulation at three months, and 1 of phthisis at two years from operation, the third is alive and well to-day.

Of the malignant cases 5 are alive to-day, 1 at three years, 1 at two years, 2 at eighteen months, and 1 at a year from the time of operation; and in all of these this method of colostomy has fully justified the opinion I have formed of it, as it has also done in all cases in which the patients have lived sufficiently long to allow of an honest judgement being formed.

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[1] *Clinical Society's Transactions*, 1906. [2] BRITISH MEDICAL JOURNAL, July, 1912. [3] Allingham. *Diseases of the Rectum*, p. 432.

URACHAL FISTULA.

BY

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As is well known, in early fetal life the allantois, the pouch from the lower end of the primitive intestinal cloaca, projects through the umbilicus. At the seventh month the upper portion of the allantois becomes normally closed and forms a fibrous cord, called the urachus, extending from the umbilicus to the urinary bladder, which is derived from its lower portion. Now and then the upper part remains patent, as the so-called urachal fistula, from which a certain amount of urine escapes upon attempts at micturition. In such a case any of the following conditions may be observed:[1]

(*a*) A button-like papillary projection at the umbilicus with an orifice at its summit, through which a probe may be passed.

(*b*) The urine may escape at several points of a hernial protrusion, covered externally by mucous membrane.

(*c*) The orifice may be a mere deficiency in the linea alba.

The abnormality may be said to be one of degree, the greatest deformity being fissure of the bladder, in which condition the allantois has failed to close completely inside the abdomen, so as to form the urinary bladder, and the lateral borders of the latter are adherent to the sides of the cleft, while the anterior wall is entirely absent. Again, the cleft may be confined to the upper part of the bladder, which presents itself as a red protrusion just beneath the umbilicus, the parts below being perfect.[2] Whichever condition exists, there is a greater or less amount of discomfort and danger.

The following case is interesting, because of the size of the projection, the presence of an apparent pouch, and the rapidity of closure with practically no interference of a surgical nature:

Mrs. W., primipara, somewhat neurotic, was confined on May 19th, 1912. Presentation was normal, and, on account of a prolonged second stage and the patient's temperament, delivery was accelerated by forceps under an anaesthetic.

The child (a male) was apparently healthy, presented no obvious signs of incomplete development, and shortly after birth weighed 7½ lb. It may be noted that the umbilical cord contained a great excess of Wharton's jelly, its circumference being 6 in. at a point 7 in. from the child. It was tied and afterwards dressed in the ordinary way.

Four days later (May 23rd) the nurse reported that the state of the navel seemed unusual, and that the infant had not passed any urine. On examination the cord was found to be partially separated and particularly foul, the surrounding skin having an inflamed appearance. What remained of it was removed, and there was found at the umbilical region, projecting quite above the surface of the skin, a bright red mass of almost cauliflower appearance, having a circumference slightly larger than that of a penny. It was tender to the touch, and at two obvious points upon its surface small globules of urine oozed, while the child cried and struggled. On passing a fine probe into these openings it was found that one led straight into the cavity of the bladder without any obstruction; the second led into the first passage, about 1½ in. from the entrance; there was a third opening on the surface into which the probe entered for only an inch, but when in this small pouch it could be moved easily from side to side. In no case could the probe be passed upwards.

The surrounding skin was smeared with a mild, unirritating ointment, and waterproof tissue, cut in such a way as to fit tightly round the base of the projecting mass, and so prevent the urine touching the skin, was applied, and on the top of this a thick pad of wool and binder, the wool being changed as frequently as was necessary. There was a slight degree of phimosis present, but when, two days later, a small catheter was passed, the urethra was found quite patent. The raw surface was dressed several times a day like an ordinary wound, and the child got frequent boric acid baths, as recommended by Vaughn,[3] to aid normal micturition.

On May 30th, eleven days after birth, the nurse stated that normal micturition had begun, and on June 6th it was seen that the pad of wool was no longer wet with urine. The protuberance had diminished in size, and, on probing, though the main canal leading to the bladder was still pervious, the smaller one could not be found, whilst that connected with the small pouch would scarcely admit the probe. The whole surface was lightly touched with silver nitrate.

On June 12th the projection was only the size of a small nut, and pink instead of red in colour. The only canal pervious was the main fistula, and no urine was squeezed out even when the child struggled, or during micturition. It was again treated with silver nitrate, the entrance to the fistula being especially cauterized.

On June 24th the umbilicus still projected slightly, but had become the colour of the surrounding skin. Probe entered the fistula with difficulty.

On August 10th there was no apparent fistula left, and all the functions of the infant were normal.

At no time in this case was there any rise in temperature, nor was any faeculent material ever excreted at the fleshy protrusion. The child, with the exception of the first few days of its existence, steadily increased in weight, and on August 10th was 16 lb., and above the average weight at that age. There were no complications, and the progress throughout was not such as to warrant more energetic methods of treatment.

In some cases a slender electric cautery has been applied to close up a small urachal tract, but this is not without danger; in others, laying open the dilated urachus at the umbilicus, curetting its walls, and cauterizing the whole interior with zinc chloride, is successful even after plastic paring has failed.[4]

In cases simpler than that detailed above the application of a ligature around the base of the papilla which will dry up and fall off, leaving the fistula permanently closed, is sufficient. The choice of any of those methods of treatment, however, must depend not only upon the local conditions at the umbilicus, but also upon the circumstances associated with the abnormality, for urethral calculus, phimosis, and congenital stricture often accompany it, and unless these are treated with a certain degree of success, no attempt at closure should be made.

REFERENCES.

[1] Treves: *System of Surgery*, vol. ii. [2] Coats: *Manual of Pathology*, p. 48. [3] *Trans. Amer. Surg. Assoc.*, vol. xxiii, 273. [4] Willard: *Surgery of Childhood*.

A COMMITTEE has been formed for the establishment of a German society of military dentistry. The president is Hofzahnarzt G. Labaschin (Berlin-Wilmersdorf).

THE Royal Academy of Medicine at Turin reminds the medical profession in all countries that the thirteenth award of the Riberi prize of £8,000 for scientific work relating to medical subjects in the widest sense will be made on December 31st, 1916. For particulars application should be made to the Secretariat of the Academy, 18 Via Po, Turin.

ENCHONDROMA OF THE MANUBRIUM STERNI SUCCESSFULLY REMOVED BY OPERATION.

BY W. G. RICHARDSON, M.B.DUNELM., F.R.C.S.,

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A. C., aged 26, a healthy, well-developed, sea-going engineer, was sent to me on February 15th, 1913, by Dr. Baker, of North Shields. He had a swelling in the lower part of his neck, immediately above the sternum (Fig. 1), and he complained of difficulty in breathing when he exerted himself.

When I first saw him he had just arrived at the Royal Victoria Infirmary, having walked uphill from the railway station, a distance of less than a mile; he looked anxious and appeared to be distressed in breathing, and he told me that he always felt the same after exertion. With the exception of shortness of breath he had no complaint to make and he appeared to be in perfect health.

History.

He had known of the existence of a swelling above the sternum for years. It had never inconvenienced him by interfering with his employment and it had never been painful. Seven months previously he noticed that it was increasing in size, and shortly after that date he began to feel some shortness of breath during exertion, but he always found that he recovered as soon as he rested. The shortness of breath, however, had become distressing during the few weeks before he saw Dr. Baker, and on that account alone he sought medical advice.

Condition on Admission.

The swelling was in the mid-line of the neck, and in appearance it was indistinguishable from an adenoma of the thyroid gland. It was densely hard, uneven on the surface, and continuous with the sternum. The sternal head of each sterno-mastoid muscle passed in front of the tumour, which was not affected by the act of swallowing. Movements of the head and of the neck were natural. There was no cyanosis and no visible distension of the veins of either the head and neck or of the arms. The patient was not aware of any alteration in the tone of his voice, and there was no pulsation or bruit in the tumour.

He was admitted as an in-patient for observation, and during the few following days he showed no symptoms whatever.

The tumour, being of very slow growth, was thought to be innocent; but, in view of the fact that the difficulty in breathing was increasing rather rapidly, there was a suspicion that it might be sarcomatous. An *x*-ray photograph showed a shadow in the situation of the tumour, but it was ill defined and little more than enough to obscure the shadows of the vertebrae.

Diagnosis.

We had to deal with a tumour attached to the sternum which was narrowing the upper outlet of the thorax and implicating the trachea at such a low point as to render it impossible to perform tracheotomy, should that operation, as seemed probable, become necessary, and thus removal of the tumour was the only alternative. The question arose, Was removal practicable? Slow growth and the absence of any symptoms pointing to infiltration of adjacent structures made it probable that there was something in the nature of a capsule, and, if that were the case, removal would be possible. In that opinion I had the benefit of the concurrence of Professor Rutherford Morison.

Operation.

I operated on March 5th. The incision was in the line of a necklace with a pendant (Fig. 2). Both sterno-mastoid muscles were fully exposed in their lower portions, and so were the great pectoral muscles and the sternum to a point below the junction of the manubrium and the gladiolus. Each sterno-mastoid muscle was divided about 2½ in. above the clavicle, but not completely, the outer part of the clavicular portion of each muscle being left. The sterno-hyoid and sterno-thyroid muscles were behind the tumour, and were divided at a late stage of the operation. Each clavicle was sawn through about ¾ in. from

its sterno-clavicular joint (Figs. 3 and 4). The portion of each great pectoral muscle which covered the first intercostal space was dissected up, and then the intercostal muscle on either side was separated from the sternum with a periosteal elevator. The sternum was sawn through immediately above its junction with the second costal cartilages, and an elevator being inserted into the saw-cut, the manubrium sterni was levered up. This latter procedure did not cause any increase of pressure upon the trachea. Each first costal cartilage was divided with bone pliers. It was found that there was a capsule over the posterior surface of the tumour, and thus the subsequent steps of the operation consisted in easing the underlying structures and the innominate veins over the irregularities of that surface—partly with the blade and partly with the handle of the scalpel. The wound was sewn up with interrupted silkworm gut sutures and a drain of iodoform gauze left in, chiefly for the purpose of checking haemorrhage from the cut ends of the clavicles; one end of the gauze was brought out at the lower end of the vertical incision.

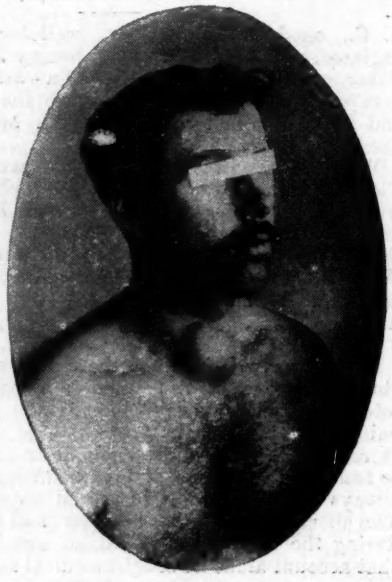

Fig. 1.—Condition on admission.

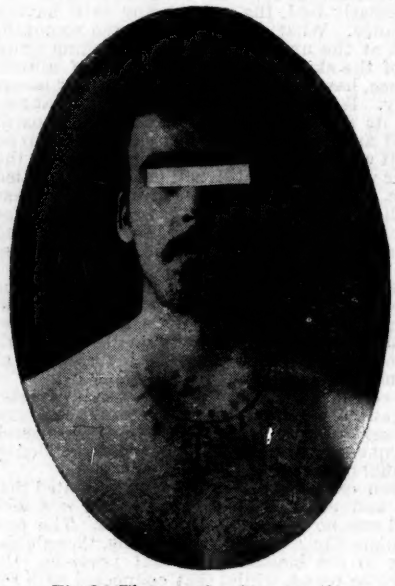

Fig. 2.—Three weeks after operation.

During the operation it was found that though the growth sprang from a point towards the left side of the upper border of the manubrium sterni, the most prominent backward projection of the tumour almost reached the spine towards the right side of the neck, and the upper opening of the thorax was in a large part occluded. The trachea was not recognized. Haemorrhage was slight. At the end of the operation the patient coughed, and the consequent distension of the veins in the floor of the wound was very alarming, as they swelled up to a degree which recalled the bulging of an abdominal ventral hernia. In the dressing a large pad of wool was retained in position by an elastic bandage to make good the absence of support normally given to the great vessels by the manubrium sterni.

Nature of Tumour.

On section, the tumour appeared to the naked eye to be a simple enchondroma, and Professor Stuart McDonald has reported that microscopic examination confirms that view.

After-History.

The wound was dressed on the fifth day, for the purpose of removing the gauze, and it was healed on the tenth day. The patient was allowed to be out of bed on the sixteenth day, and he is now well.

The remaining portion of the clavicular head of each sterno-mastoid muscle acts strongly, and both arms can be raised from the sides, at full stretch, until the palms of the hands meet together high above the head, or are placed together straight out forwards.

Fig. 3.—Photograph of the whole mass removed, viewed from the right side. A, Posterior surface, showing the irregular, walnut-like surface of an enchondroma; B, Anterior surface; C, Upper surface; C to D is the plane of transverse division of the tumour. 1, Clavicle; 2, First costal cartilage; 3, Sawn edge of sternum.

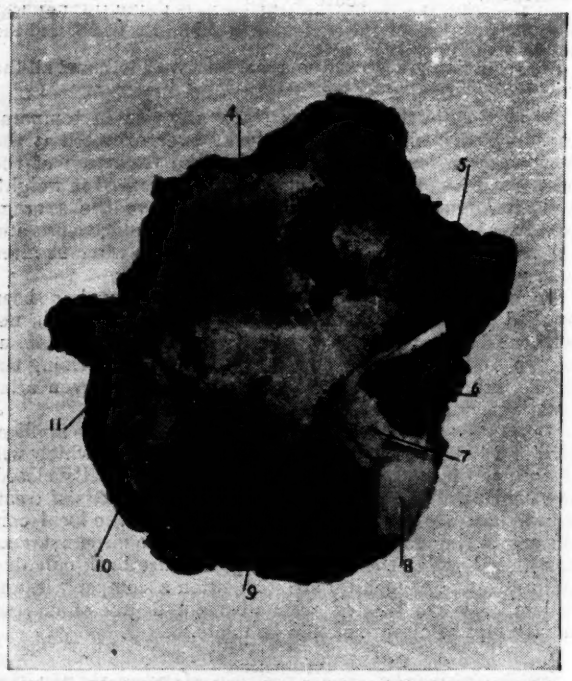

Fig. 4.—Photograph taken after division of the tumour, and it shows the anterior half, viewed from behind. 4, Enchondroma; 5, Sterno-mastoid muscle; 6, Right clavicle; 7, Sterno-clavicular joint; 8, First right costal cartilage; 9, Manubrium sterni; 10, First left costal cartilage; 11, Left clavicle.

A CASE OF ABDOMINAL ANEURYSM WITH UNUSUAL FEATURES, OPERATED ON BY MEANS OF COLT'S APPARATUS.*

BY

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AND
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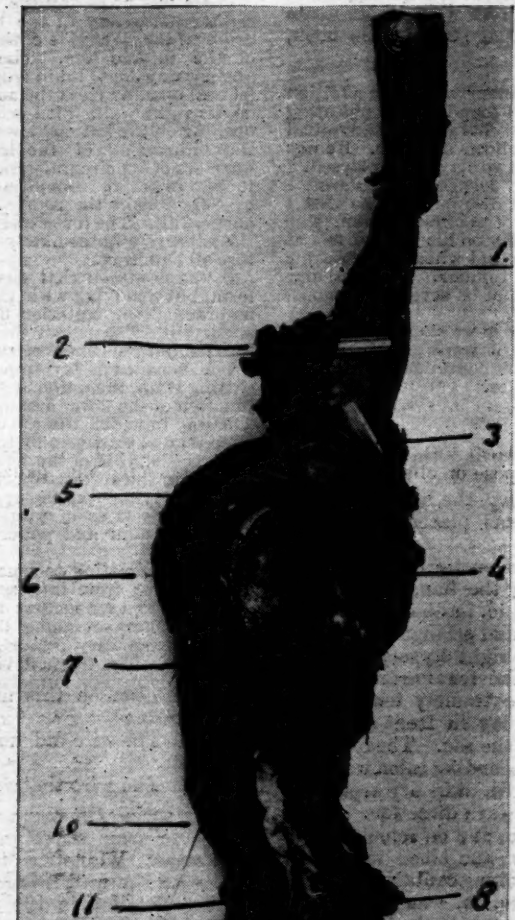
C. P., aged 41, had all his life been a farm labourer, and had enjoyed good health with the exception of having attacks of "indigestion" and being subject to colds. During the past twelve months he had lost weight and had lately been troubled with obstinate constipation.

He was at full work up to the day of his present illness and was accustomed in the course of his work to carry a sack of meal weighing 2½ cwt. On March 26th, 1912, he was at his work as usual when he was seized with what he described as a pinching pain which doubled him up and caused him agony. He went home to bed; his wife applied hot fomentations and the pain became less. The next morning he was feeling so well that he started out to work, but as soon as he began to labour he was seized with the same pain as previously and soon after vomited some green fluid. He returned to bed, and on April 2nd was sent into hospital on an ambulance as a case of acute appendicitis. He was admitted to the surgical ward and on the following day we saw him together, and he was transferred to the medical side.

The man was very pale, sweating, and in considerable pain, which he located as griping him right across the abdomen above the umbilicus and going into his back. The temperature was 100° and the pulse 66. The right side of the abdomen was contracted but was not hard. There was a little tenderness to palpation over the right hypochondrium, but no tenderness. Any attempt at deep palpation produced contraction of the abdominal muscles. The area of cardiac dullness was enlarged, the apex beat was in the sixth space in the nipple line, and the blood pressure was 115 mm. of mercury. The knee-jerks and pupil reflex were normal. The urine contained a few red blood cells. The leucocyte count was under 8,000 on the three occasions on which it was examined, the haemoglobin was 100 per cent.



1, Aorta. 2, Coeliac axis. 3, Left renal artery. 4, Oval opening into aneurysm. 5, Upper end of wire which has penetrated into the aorta. 6, Point at which the wire was inserted. 7, Lower end of wire lying just outside the endothelium. 8, Left common iliac artery. 9, Right common iliac artery. 10, Vena cava. 11, Dissecting aneurysm round the left common iliac artery.

He was ordered belladonna suppositories and hot fomentations to the abdomen. On the following day he was much easier and the abdomen less contracted. For the next few days he felt so much better that he asked each day to be allowed to go home and resume his work. On April 6th he passed some bright blood with a motion, and had a considerable amount of pain, for which he was given morphine. The pains now were more severe, and occurred more frequently; they were always in the same region, and he thought that the pain in the back was worse than the pain in the abdomen. On admission he lay on his left side, but later preferred to lie on his right side or on his back. The abdomen was always flatulent, and palpation was accompanied by much gurgling. The stomach was dilated.

The least exertion, as turning in bed, was liable to evoke paroxysms of the most acute pain, which rendered him pallid and perspiring. On two occasions he was in a bad attack of pain when one of us entered the ward, and the pain ceased on palpating the abdomen. The pain would come on suddenly and leave him abruptly, and, though he was an extremely plucky man, he suffered at times severely, in spite of receiving one-sixth of a grain of morphine every six hours.

We could now make out a swelling in the right hypochondrium, below the ninth costal cartilage, and wholly to the right of the middle line; the tumour pulsated, and though it was difficult to say whether the pulsation was distensile, we thought it was. A loud single sound, systolic in time and impure in character, but not harsh enough to be termed a bellows murmur, was audible over the swelling and along the spinal column. We made an entry in the notes that we were surprised to find that the pulse in the dorsalis pedis, could not be felt on the right, but easily on the left. On the following day (April 14th) the right leg and foot became oedematous. There was no sign of oedema in the left foot until April 28th, two days before the operation, when it too became oedematous. On April 14th the collateral circulation was evidenced by the distension of the right epigastric vein and by little patches of dilated venules on the right side below the costal arch. The temperature continued irregularly febrile in character. Constipation was difficult to treat, as anything in the nature of laxatives by the mouth caused him much pain.

The diagnosis was beset with difficulties. Absence of tenderness in the right iliac fossa and on rectal examination seemed to exclude appendicitis. The finding of red blood cells on three occasions in the centrifugalized deposit from the urine, the sudden paroxysmal pains, and the contracted right abdominal muscles, suggested a renal cause. The history of loss of flesh (the patient was clearly wasted), with recent obstinate constipation, a tumour to be felt, a considerable haemorrhage from the rectum, and oedema of the right leg suggested strongly the existence of a neoplasm of the bowel, with a deposit pressing on the right common iliac vein. The absence of all anaemia and of any leucocytosis was evidence against malignant disease. The expansile pulsation of the tumour, the delay in the artery of the foot, the bruit over the swelling and also over the spinal column, and the character of the pain, agonizing while it lasted and then ceasing, and readily evoked by movement of the bowels or of his position in bed, pointed to the presence of an aneurysm.

* Communicated in brief to the Surgical Section of the Royal Society of Medicine.

While fully recognizing that abdominal aneurysm is nearly always on the left side of the abdomen, and in spite of the fact that Stokes states "fever is rarely met with in any stage of abdominal aneurysm,"[1] and that he has never observed in cases of abdominal aneurysm "collateral venous circulation, as shown by the enlargement of the epigastric veins,"[2] we formed the opinion that we were dealing with an abdominal aneurysm. The patient urged us to do any operation which might ease his pain.

To a great extent encouraged by the successes of Mr. Wheeler of Dublin[3] in operating on these cases, we decided to wire the aneurysm, and obtained Colt's apparatus for doing so. Before describing the operation there is one other point to which we would draw attention. Examining the patient every day in the ward, we found the aneurysm varied in the ease with which it was palpable, and on three or four occasions we were told by the house-physician that the tumour had disappeared. It certainly required at times much deeper palpation in order to feel it. This is worth recording, as it agrees with a note made by Stokes in regard to Case lxxiv, page 632 in his book, *Diseases of the Heart and Aorta:*

> I had no difficulty in recognizing an aneurysm, for in addition to the evidences from the symptoms I found a large pulsating tumour in the epigastrium, having every character of abdominal aneurysm, and presenting a distinct bellows murmur. He was admitted into hospital, where, after two days had elapsed, I examined him a second time. To my surprise, the epigastric tumour which had been manifest had disappeared; so that I began to hesitate as to the correctness of the first opinion. The patient now mentioned that when he lay on his side he felt at ease, and the tumour disappeared, but that when he lay on his back the pain returned, and also the tumour. This singular experiment he performed in my presence on several occasions, and always with the above result.
>
> I do not remember ever witnessing a more singular circumstance than the reappearance and as it were growth of the tumour under the hand when the patient continued on his back for a period certainly within two minutes.

Operation.

The operation was performed on April 30th. The patient was anaesthetized with chloroform by Dr. Tatham, Mr. Howell, our colleague, and Mr. Henry, the house-surgeon, assisting. A rubber air cushion was placed under the dorsal spines.

The abdomen was opened from the ensiform cartilage to below the umbilicus. On passing the hand in a large globular pulsating swelling about 4½ in. in diameter, or the size of a large Jaffa orange, was found springing from the aorta, and extending over to the right hypochondrium. The tumour reached from below the renal artery to the bifurcation of the aorta. It was extremely tense. The transverse colon and the duodedum lay in front of it, the latter being adherent to the wall of the sac. The reflexion of the external peritoneal from the ascending colon was torn through, and the duodenum was with difficulty separated from the sac in an upward and inward direction. Colt's trocar was thrust into the aneurysm, and on removing the aspirator a jet of blood shot up 2 ft., and blood welled up by the side of the cannula. A cap packing containing 150 in. of wire with a surface area of 3½ sq. in. was passed into the tumour. On withdrawing the cannula there was free bleeding from the side of the puncture, which stopped after ten minutes' pressure with a gauze sponge. The abdomen was closed without a drain.

The patient stood the operation fairly well, but had extreme pain afterwards, which 1½ grains of morphine in the twenty-four hours following the operation failed to control. He complained even more bitterly of inability to sleep than of the pain. In addition, he caused grave anxiety by frequently vomiting large quantities of dark green watery fluid. In fact, this vomiting with inability to pass flatus or a motion for the first three days after the operation suggested that the irritation of the wire was reflexly causing a spasmodic intestinal obstruction; be this as it may, on the fourth day he passed a small partly formed motion, and the vomiting grew less. A few hours after the operation the dorsalis pedis in the right foot could be felt easily. The day following the left foot was observed to be more oedematous than the right, from which the oedema was disappearing; on May 3rd all trace of oedema had left both feet and legs. On auscultation on May 3rd the bruit was much coarser and was a definite bellows murmur.

It has already been shown that there was a definite relation between the condition of the bowels and the occurrence of pain in the aneurysm. Both constipation and the effect of purgatives evoked pain. We think this to be of importance as a diagnostic sign, as the same has been described in the classic case recorded by Beatty in 1829,[4] and referred to in Stokes's book.

On May 5th the patient was still vomiting, though to a lesser extent, and said he felt much better. Thinking the vomiting might be due to dilatation of the stomach one of us tried to pass a soft tube to wash the stomach out, but this caused so much discomfort and retching that we deemed it wiser to stop lest the aneurysm should rupture. On May 6th the patient was distinctly weaker, the vomit a dirty brown colour but without faecal odour. We transfused 2 pints of saline, but the patient sank in the evening.

Post-mortem Examination.

There was no peritonitis. The aneurysm extended from the right renal artery to the bifurcation of the aorta. The sac came off the right side of the aorta, and lay wholly to the right of the middle line. The external measurements of the aneurysm were 4½ in. in length by 3 in. in breadth. There was an oval opening from the aorta into the aneurysm, 2 in. by 1 in., on its right wall, filled with firm clot. There was a further opening on the left and lower extremity, directed down outside the bifurcation of the left common iliac, encircling three quarters of its circumference. The upper end of the wire was found projecting through a point ⅝ in. above the centre of the oval opening on the right side, having torn its way through the aortic wall. The lower end of the wire was tucked away inside the aneurysm immediately outside the end of the liver, which tore on handling.

It was now seen that the wire had not opened into a cage form, but was lying with the component wires close together, embracing the anterior border of the opening into the aneurysm. The site of the puncture made by the trocar was ½ in. behind the centre of the aneurysm.

The vena cava lay immediately below the aneurysm; on slitting it up, the union of the two iliacs was seen to be at the junction of the lower and upper three-fourths of the aneurysm. The way in which the aneurysm overhung the right iliac vein offered an explanation of the fact that the oedema of the right leg preceded that of the left. Small patches of atheroma were present in the aorta and common iliac vessels. The transverse colon was lying over the upper half of the aneurysm. The left renal vein was seen running just above the superior border. The duodenum and pancreas were very closely adherent to the sac.

It was interesting to note that, in spite of the fact that the man suffered from intense pain, there was no erosion of the vertebrae, and we suggest that the pain was caused by the dissecting aneurysm along the left common iliac artery. The stomach was very dilated, its lower border reaching to the umbilicus. The thoracic viscera were normal.

In criticism on this method of treatment we submit the following:

1. The wire did not form in a cage as it is supposed to do.
2. The wire that we used was too strong.

After seeing the result of the *post-mortem* examination we made some experiments on tennis balls with Colt's apparatus. We noticed that when the wire came in contact with the wall it failed to spread out in the same way as it had failed in the aneurysm. Apparently, in order that the wire should spread out into a cage form, it is necessary that it should have sufficient room to do so without encountering much peripheral resistance.

We suggest that it might be an advantage if the ends of the wires were turned in, forming when closed a cartridge resembling the folding of an umbrella probang; and, when opened out, a cage like a ball of string. We also suggest that if the component wires were roughened it would lead to more rapid clotting in the sac.

REFERENCES.

[1] *The Diseases of the Heart and Aorta*, by William Stokes, 1854, p. 647. [2] Ibid., p. 649. [3] Wheeler, Annual Meeting, British Medical Association. [4] Stokes, p. 610.

THE Russian Duma has petitioned the Government to establish some new medical faculties in different parts of the empire.

THE twelfth International Congress of Ophthalmology will be held at St. Petersburg in August next, under the patronage of the Czar. The official languages will be French, English, German, Russian, Spanish, and Italian. The subjects proposed officially for discussion are the etiology of trachoma and the nutrition of the eye.

CHEILOTOMY FOR CRIPPLING TRAUMATIC ARTHRITIS OF THE HIP-JOINT.

By W. I. DE C. WHEELER, F.R.C.S.I.,
SURGEON TO MERCER'S HOSPITAL, DUBLIN.

I was much interested in the communication published under the joint names of Mr. Sampson Handley and Dr. Preston Ball which appeared under the above heading in the BRITISH MEDICAL JOURNAL of May 3rd.

I have many times, in common with other surgeons, operated upon cases of chronic rheumatic arthritis to relieve pain and deformity, but as my last case is identical in all essential respects with the two cases described in the communication, and as the operation was performed on the patient's hip on October 22nd last, three months before Mr. Sampson Handley operated upon his first patient, it may be of interest to mention the outstanding features, and thus put a third case on record. The question of priority is of no great importance, but Mr. Sampson Handley and Dr. Preston Ball are in error in thinking that the operation had not been performed prior to their first case in January, 1913.

Miss H. D., aged 21, residing in London, was sent to me in September last, the subject of polyarticular chronic rheumatic arthritis from which she had suffered from childhood. The left knee-joint, the right hip and the two wrists were disorganized with the changes characteristic of the disease. The left knee could not be completely extended without intense pain, and the right hip could bear no weight whatever, the slightest pressure on the heel causing pain in the joint. Locomotion was therefore only possible with the aid of crutches, and even then was attended with much suffering. She had been dependent on the use of crutches for seven years.

X-ray photographs, taken by Dr. Hayes on September 9th, showed lipping of the tibia to the outer side of the left knee-joint, which was the site of great tenderness. A ring of osteo-arthritic bone surrounded the right hip, impeding every movement of the joint, stretching the capsule, and on pressure evidently abutting against the rim of the acetabulum and the neighbouring bone.

The first operation was performed on the knee-joint on September 12th. (It should be mentioned that the shortening produced by the enforced flexion was corrected in London by raising the boot about 2 in.) Through an incision made along the outer side of the knee-joint the lipping of the tibia was removed with a gouge and chisel through a well-marked line of cleavage such as is seen in the new bone formed in connexion with a bunion. A weight and pulley was attached to the limb for about ten days to correct the flexion, and massage was applied for a short time subsequently. All pain disappeared immediately after the operation, and on removal of the weight and pulley the joint could be fully extended and flexed.

The result of this operation encouraged me to operate upon the hip of the opposite side on October 22nd. The joint was opened through Kocher's posterior incision. There was a well-marked "cornice" of newly-formed bone encircling the junction of the head and neck of the femur, giving it the mushroom appearance commonly seen in the specimens of chronic rheumatic hips found in the surgical museums.

The capsule having been freely opened, the hip was rotated in all directions by an assistant, and the new bone was chiselled away from about two-thirds of the circumference. The result of the operation surpassed all expectations. The following day pressure on the heel caused no pain. The stitches were removed in ten days and the patient was allowed up. She could now bear her entire weight on the right limb, and the movements of the hip-joint were free and painless. Subsequent progress was uneventful. I saw the patient when in London last week, and she is walking without crutches in absolute comfort after being a cripple for seven years. I can arrange for Mr. Sampson Handley to see the patient and the *x*-ray photographs if he is interested in the case.

I was glad to read the result of his two cases, which convinces me that my result was no exception, and that in selected cases the operation of "cheilotomy" is destined to give instant relief, and to change completely the outlook for a certain class of crippled patients. I think the title of the paper would be better if the word "traumatic" were omitted; the etiology matters little if the pathological changes are the same.

I should mention that practically every form of treatment, including the use of vaccines and serums, had been tried in my case during the nine years she had suffered from the disease. The condition of the wrists has improved considerably since the patient has been able to discard the use of crutches.

THE INTERNEURONIC SYNAPSE IN DISEASE.

BY
B. HENRY SHAW, M.B.,
SENIOR ASSISTANT MEDICAL OFFICER, COUNTY ASYLUM, STAFFORD.

I have long felt that the cell-exhaustion theory does not satisfactorily explain the pathology of acute delirium. Take, for instance, such a case as this: A young woman, while walking in her sleep, falls from a height, injuring herself severely, and at once becomes acutely delirious; or a girl, owing to a celluloid comb in her hair suddenly taking fire, immediately develops acute insanity; or a similar state results in an elderly widow on finding her sister dead in the same bed. Up to the occurrence of the shock, a state of mind entirely normal to the individual apparently exists, and almost immediately after we find more or less complete inco-ordination of the higher centres and misinterpretation of stimuli. Inco-ordination of the higher centres is the outstanding result. To my mind, this suddenly developed condition, accompanied as it is by extreme motor restlessness, cannot logically be due to cell exhaustion. For purposes of comparison I have examined my records of 17 cases of insanity occurring after surgical operation in which the undoubtedly important factor producing the alienation was exhaustion—physical and mental—plus the slight shock of the operation perhaps, and contrasted them with 25 cases of insanity immediately supervening on sudden and violent mental shock, with the following results:

TABLE I.—*The Types of Insanity Resulting.*

Type of Insanity.	Etiological Factor.	
	Shock.	Operation.
Acute delirium	11	4
Confusional insanity	5	—
Melancholia	5	9
Mania	3	3
Stupor	1	—
Delusional insanity (systematized)	—	1
Totals	25	17

TABLE II.—*Ages at Onset.*

Age.	Etiological Factor.	
	Shock.	Operation.
Under 20 years	4	1
21 to 30 ,, ...	5	2
31 to 40 ,, ...	3	5
41 to 50 ,, ...	4	6
51 to 60 ,, ...	4	3
61 to 70 ,, ...	5	—
Totals	25	17

As regards predisposing causes, a family history of insanity was ascertained in 28 per cent. of the cases due to shock, and in 23.5 per cent. of those due to operation.

TABLE III.—*After-History.*

	Recovered.	Died.	Permanently Insane.
(a) *Cases due to Shock:*			
Acute delirium	6	4	1
Confusional insanity ...	3	—	2
Melancholia	3	—	2
Mania	1	—	2
Stupor	—	1	—
(b) *Cases due to Operation:*			
Acute delirium	2	2	—
Melancholia	4	3	2
Mania	2	—	1
Delusional insanity (systematized)	—	1	—

The average period required for recovery was in the cases due to shock 5.8 months, and in those due to operation 16.2 months, practically three times as long. In 50 per cent. of the cases resulting from shock which became chronic a definite family history of insanity was obtained. The average period of recovery of the deliriant cases was practically the same in both, namely, three to four months.

It will be noticed that the type of insanity resulting from severe shock is decidedly different from that produced when exhaustion is the important etiological factor. Acute delirium resulted in practically half of the former cases—and, indeed, the confusional cases were verging on delirium—melancholia in more than half of the latter. In other words, as a result of sudden and severe mental shock, the tendency is to acute delirium, and when prolonged exhaustion enters into the causation the tendency is to depression. From my cases, too, I am justified in saying that the greater the shock the more the tendency towards delirium. Now if this is sought to be explained by saying that the delirium is a more intense reduction, the fact that complete recovery is both more probable and more rapid in these cases than in melancholia must be reckoned with.

Again, the tendency in acute delirium is either towards rapid recovery or death. Only one out of the whole 15 cases became permanently insane, which is in marked contradistinction to other forms of insanity. In the one case, which became a secondary dement, there was a strong family history of insanity, and she was herself of a very low mental type. One would expect profound cell exhaustion to produce a depressive—almost stuporose—type of insanity, whereas what we apparently find as a result of intense mental shock is the opposite.

In cases due to shock the age has apparently no influence worthy of notice. This is quite different from what obtains in post-operative cases, among which 8 out of the 17 occurred between the ages of 40 and 50 inclusive. The fact that 11 of the whole 17 were operated on for uterine or ovarian trouble will throw some light on this.

I think it may fairly be assumed that the delirium resulting from sudden nervous shock cannot satisfactorily be explained by the theory of cell exhaustion.

Whatever be the nature of the nerve current, the cell has apparently the power of releasing energy on the reception of a stimulus corresponding in degree to the intensity of that stimulus. The balance of evidence appears to be in favour of the nervous impulse being a physical process, and it is, I think, satisfactorily established that resistance to its passage is principally met with at the inter-neuronic synaptic membranes and finer terminal arborizations.[1]

It is a matter of common observation that minor degrees of shock are accompanied by a rigor-like thrill. A weird sound in the silence of the night, the presence of a human form at a time and place when and where it is not expected, will give rise to a "start" and a conscious sensation as of an electric-like discharge throughout the system. If this is a matter of common observation on the occurrence of slight or moderate degrees of shock, is it not probable that a very intense nervous discharge might cause serious damage to the finer nerve arborizations and synaptic junctions, and that, just as under similar conditions electrically the fusion of a wire would take place, so here, as a result of intense shock, we may have some degree of what might be termed "synaptic fusion" of the higher neurone terminals and interneuronic membranes, causing dissociation of the higher centres and misinterpretation of stimuli? These higher associative neurones being the latest to develop their terminal arborizations, are probably the most delicate.

The effect of very intense nervous shock on the memory is similar to that occurring after severe concussion—namely, there is total lack of recollection of the shock itself and of events happening shortly before, or, at best, the recollection is very indistinct. A further point of interest is the fact that the average period required for recovery in acute delirium resulting from shock is identical with that required for nerve regeneration as a result of trauma—namely, three to four months.

In a few cases return to co-ordinated thought is apparently sudden. It seems probable that in these cases synapses of association fibres not in common use were probably uninjured by the discharge, allowing an almost sudden return to sanity once the current found a new path connecting up the higher centres. The tendency of the nervous impulse to revert to its accustomed course would account for the fact that such cases are very liable to slight relapses before ultimate recovery. In those cases which quickly result in death, may it not be due to the intensity of the discharge causing damage to many more axone terminals than would occur in a slighter degree of shock which in another case will terminate in recovery, given similar resistance at the synapses?

There are different degrees of synaptic resistances.[2] Sherrington states that "there is abundant evidence that synapses differ from one another" in this respect, and the action of strychnine and tetanus toxin affords further proof. Now, if in the same individual different degrees of synaptic resistance are met with, is it not probable that individuals will differ with regard to nervous irradiation, owing to the fact that in general their synaptic resistances are heightened or lowered abnormally? Strychnine and tetanus toxin have the effect of lessening synaptic resistance and of converting normal spinal inhibition into excitation.[3]

I have noticed that great susceptibility to the action of strychnine exists in hysteria, relatively small doses causing most unpleasant sensations, such as tachycardia and much mental uneasiness. Might not this indicate that in hysteria the neuronic trouble is synaptic—that there is normally in this affection too little interneuronic resistance, resulting in a constant leakage of current, so to speak, outside the area to which it is limited in the normal individual? Supposing this is so, what would we expect? "The hysterical temperament," to quote Starr, "is manifested by an abnormally keen sensibility to all external impressions and sensations, and a susceptibility to suggestions, by a manifest incapacity to exercise control over thought, emotion, and action, and by a tendency to act on sudden impulses."[4] In other words, stimuli which normally would only take a certain definite course, owing to a lowered interneuronic resistance become diffused in their effects on the higher associative centres, and also concomitantly the ultimate stimulation is more intense than normal, hence hyper-ordinate and inco-ordinate reaction. The mental process resulting from sensory stimuli is in the normal person orderly, and in nine cases out of ten similar stimuli will result in a similar train of thought, but given a generally lowered synaptic resistance it is obvious that these same sensory stimuli will not confine themselves to the same orderly path, but that in addition other associated neurones will be affected, which in the normal individual would remain quiescent. Ideation is confused and chaotic and conduct illogical, distractibility is intense, the nervous mechanism is out of control and feels the need of a stronger mind, hence its susceptibility to suggestion and hence the ready obedience to the commands of one for whom the hysterical person feels respect and has confidence in.

This would probably be the result of an abnormally lowered synaptic resistance. Now imagine the opposite—an abnormally heightened resistance. Is it not possible that the periodical disorderly discharge of nervous energy in some cases of epilepsy may be due to certain neurones

acting practically as storage batteries owing to the fact that the synaptic membranes which separate them from contiguous neurones present an abnormally great resistance to the passage of the impulse, thereby practically insulating these neurones until such time as the resistance is overcome by accumulation of energy or by the reception of a violent stimulus?

An important etiological factor in the production of acquired epilepsy is alcohol. Now, alcohol spends itself principally on the interstitial tissue; it is therefore quite likely that its circulation through the nervous system will have a more injurious effect on the interneuronic junctions than on the neurones themselves; it is also quite probable that alcohol will have a selective action on different series of synapses in different individuals. A cirrhotic liver is rarely seen in the asylum *post-mortem* room, and the moral loss of tone so common in chronic alcoholics and the peculiar memory disorder may result from dissociation of the higher association centres, and consequent lack of orderly thought and judgement.

That a sudden fright is so frequently thought to be the determining cause of epilepsy is of much interest in the light of the suggestion that acute delirium as a result of shock may be due to what I have termed "synaptic fusion." It might be possible that this fright has caused minute structural change in certain synaptic junctions, perhaps in the way of upsetting the normal polarity or causing temporary insulation, if one might use the term, of neurones, and spasmodic and irregular nervous discharge as a consequence. The idea that epilepsy may be due to faulty synaptic conduction is a fascinating subject for speculation; for instance, if we suppose the channels connecting the cerebrum and cerebellum to be affected, then as a result of spasmodic action at these synapses, and consequent brief interruption of the normal inhibitory influence of the cerebrum, a condition analogous to decerebrate rigidity would result, and the clonic spasms succeeding the tonic are what we would expect to find before the establishment of association is again complete.

It is not, of course, suggested that in every case of epilepsy synaptic disorder is present; for instance, convulsions are readily produced in children by slight irritation of peripheral neurones (phimosis, etc.). This may be due to the distracting effect of these stimuli on cerebral neurones, resulting in temporary cessation of the normal inhibitory influence of the latter over cerebellar tonus.

My attention has been called to the fact that Dr. Stoddart has already expressed the opinion that there is increased synaptic resistance in acute confusional insanity. As his reasons, he gives the effect of repeated subliminal stimuli in overcoming the analgesia which is present, which he compared with Sherrington's experiments on the scratch reflex of a dog, and the fact that he has met with success in the treatment of some cases with strychnine.[6] I have not found any benefit from the exhibition of strychnine in these cases; indeed, it was this fact which led me to think that some definite synaptic lesion had occurred. In epilepsy, on the other hand, I have found decided alteration, in the majority of cases, both in the number and intensity of the fits during the administration of strychnine—in 25 per cent. there was no apparent difference, in 50 per cent. the fits were decreased both in numbers and intensity, and in 25 per cent. they were increased. This inconstant effect is to be expected, as the pathological basis of epileptiform convulsions must undoubtedly vary greatly; for instance, it may be that the neurone is irritated through its blood supply either mechanically by vasomotor action or intravascular clotting, or by the direct effect of toxins, or it may be that the cortical neurones are themselves intrinsically abnormal. In any of these cases strychnine is not likely to have any definite effect; but if the sudden discharge of nervous energy is due to faulty synaptic action, either in the way of constant or spasmodic excessive resistance to the passage of the current, then it probably would have some effect on the number and intensity of the seizures. Bearing in mind Hughlings Jackson's speculation that post-hemiplegic muscular rigidity was due to the unantagonized action of the cerebellum, which is the centre for continuous (as is the greater brain for changing) movement,[8] it seems possible that the convulsions resulting from excessive doses of strychnine may be due to some kind of synaptic spasm affecting the cortico-cerebellar fibres. He says: "When the influence of the cerebrum is permanently taken off by disease of the cerebrum, as in hemiplegia from the parts which it most especially governs (arm and leg), the cerebellar influence is no longer antagonized, there is unimpeded cerebellar influx, and hence rigidity of the muscles which in health the cerebrum chiefly innervates."

In this connexion also the experiments of Ferrier on the electrization of the cerebellum of monkeys are of much interest;[7] the ocular and other movements produced were similar to those occurring in epileptic convulsions. He found, on stimulating different portions of the cerebellum, backward, forward, and left or right movements resulted corresponding to certain definite cerebellar areas; also—an interesting fact in view of the involuntary cry so common in epilepsy—he found that irritation of the adjacent testes "invariably excites a sudden bark or howl." Now if we suppose faulty action at the cortico-cerebellar synapses to exist, allowing momentary unimpeded discharge from the cerebellar neurones, the result would be a tetanic seizure, becoming clonic as the cerebral influence resumed its sway, and the nature of the seizure would indicate which cerebellar area was primarily affected. Epileptics generally fall in each fit in the same way, so that when the eyes are moved upwards and the head thrown back the initiatory discharge would probably be in the monticulus cerebelli, as Ferrier has shown that such movements result from irritation of this area.

REFERENCES.

[1] C. S. Sherrington, *The Integrative Action of the Nervous System.* [2] Ibid. [3] Ibid. [4] M. A. Starr, *Nervous Diseases.* [5] W. H. B. Stoddart, *Mind and its Disorders*, second edition. [6] Hughlings Jackson, *The Medical Examiner*, London, 1877-78. [7] David Ferrier, *The Functions of the Brain.*

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

SUTURE OF TENDONS.

OWING to the relatively unsuccessful results frequently following the suture of tendons, especially when closely adjacent tendons and their sheaths are injured, I have adopted the plan, after suturing each tendon, of surrounding it at the line of suture with a wrapping of membrane taken from beneath the shell of an egg sterilized by boiling. The tendon sheath is then closed.

I have seen no mention of this material having been used for the purpose of preventing the formation of adhesions, and venture to bring this method to notice as one easy of application, and one from which I have obtained improved results.

T. T. JEANS,
Fleet Surgeon, R.N.

A CASE OF ACTINOMYCOSIS TREATED BY A VACCINE.

THE following case, although not unique, may help to emphasize the curability, even in advanced cases, of that somewhat rare disease, actinomycosis. As is well known, the outlook in advanced cases of this disease is particularly gloomy.

The patient, a schoolmaster, aged 40, chewed a stalk of corn whilst taking a country walk last June. Throughout July he noticed a gradual deterioration in health; in August a definite swelling appeared above the outer part of Poupart's ligament in the left groin; this was a hard, fixed mass; shortly afterwards swellings appeared also between the shoulders and at the back of the neck. The tumour in the groin was incised at the London Hospital, and was found to contain the fungus of actinomycosis. As further swellings appeared he was sent home, and the case was considered and treated as hopeless. Potassium iodide, which had been given freely, was wholly without effect.

As the condition was at one time alleged to be the result of an accident on duty, I was asked to see him and report to the London County Council. When I saw him on November 16th, 1912, he was confined to his couch; he was pale, emaciated, with a large suppurating abscess in the left iliac fossa, a second in the left costal margin in the nipple line, and a third between the shoulders. His mental

attitude and physiognomy reflected the pessimistic prognosis which his medical attendants had made, and of which, unfortunately, he had become aware. The outlook was indeed dreary, for he was rapidly and steadily wasting.

I induced his doctor to send him to Sir Almroth Wright, who kindly at once undertook the case, and to whom I am indebted for permission to publish it. Eleven days after I saw him he was given a vaccine injection from stock, the dose being 7½ million. He at once improved, and by January 11th, 1913, the dose had been brought down to 5 million once a week. In February of this year an autogenous vaccine was for the first time used; this was administered regularly up to March 18th. He had in all some seventeen inoculations.

On April 30th he called on me and stated that he had returned to work. His groin trouble had entirely disappeared; two small healing wounds remained; both will probably heal in a few weeks; he has gained much weight, looks the picture of health, and is, and has very good reason to be, grateful that he lives in the days of vaccine treatment.

London, W. JOHN COLLIE, M.D., J.P.

CARIES OF THE MILK TEETH.

THE reluctance of dentists to undertake conservative treatment of the teeth in school children is easily understood. Filling is very tedious and exhausting, and only work carefully done is of any avail in a young mouth.

The following few simple rules as to extraction may be of use:

1. Where the tooth is painful on mastication, either from pulpitis or periodontitis, extract.

Reason. The avoidance by the child of vigorous mastication will hinder development of the jaw, the latter not depending entirely, as is sometimes supposed, on the presence of teeth.

2. Where the tooth has an abscess or chronic sinus, extract.

Reason. The tooth is dead and will not be shed at the proper time. Although the patient may not complain of pain at the time of the interview, there are certain to be periods of subacute inflammation when vigorous mastication is suspended.

3. If the tooth has an interstitial cavity on the side near a permanent tooth, remove before the latter is affected. The most usual instance is that of a cavity in the distal surface of the second temporary molar infecting the first permanent molar.

Much may be done by breaking down cavity walls and rubbing with lunar caustic, a deposit of secondary dentine with complete repair of a carious surface being a frequent and happy result. To be successful with this, the tooth must be alive and have no gross exposure of the pulp.

The above hints are intended as guides for institutional and school work only.

Bury St. Edmunds. H. E. H. TRACY, M.R.C.S., L.D.S.

*** This memorandum was elicited by a question published in the BRITISH MEDICAL JOURNAL of March 29th, p. 696.

THE report for 1912 of the council of the Metropolitan Provident Medical Association shows that during the year it has devoted much time to anxious consideration of the new circumstances created by the Insurance Act. It hoped to be able to devise some plan by which the association would become part of the working machinery of the Act, but became convinced that no step in this direction was possible. The association will continue its work on the same principles and with the same aims as heretofore, though difficulties, it is expected, will ensue from the loss at every dispensary of the bulk of the insured persons; the council, however, feels that this loss increases rather than diminishes its responsibility towards women, children, old people, and other uninsured persons, and hopes that its endeavour to retain for them the fruits of thrift and self-dependence will be acknowledged by an increase in charitable contributions. The payment rates for provident members have been revised and have been accepted as fair by all parties concerned. Much gratitude is expressed towards the medical staff of the association for its loyalty and co-operation during a very trying period.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN HOSPITALS AND ASYLUMS.

UNION HOSPITAL, BRADFORD.

THE VACCINE TREATMENT OF ACUTE LOBAR PNEUMONIA.

(By W. C. LYONS, M.B., Ch.B., Assistant Medical Officer.)
(From the Department of Pathology, University of Leeds.)

THE following cases of acute lobar pneumonia which have been treated with a pneumococcus vaccine show results which indicate the value of the treatment in such cases.

A vaccine of the pneumococcus was prepared by inoculating a mouse intraperitoneally with sputum derived from a case of acute lobar pneumonia. The animal died from general pneumococcal infection and its heart blood was plated out on nutrient agar. An emulsion was made from the agar culture with normal saline and killed by heating to 56° C. for one hour, and ½ per cent. phenol added, and the vaccine standardized.

The vaccine and method of dosage were the same for all four cases. In all, four injections were made in each case, twenty-four hours elapsing between each injection. The first dose contained 5 million organisms, the second and third 10 million each, and the fourth 15 million. The vaccine was given subcutaneously into the abdominal wall.

CASE I.

L. R., aged 34, male, was admitted on the third day of the illness, having well-marked signs of consolidation in the lower lobe of the left lung, with a typical pulse-respiration ratio. The sputum was rusty and viscid; pulse dicrotic; mild delirium. Twelve hours after the first dose the temperature fell from 102.4° F. to 100.4° F.; after the second it became 100.8° F., falling after the third dose to 99.2° F., and after the fourth dose, on the eighth day of the disease, it fell to 98° F., and remained about this level during the remainder of the stay in hospital. There was no change in the pulse or respiration rate until after the third dose, when they began to fall, and finally became normal on the tenth day of the illness.

CASE II.

F. S., aged 24, male, was admitted on the third day of the illness, with the usual signs of consolidation in the lower lobe of the right lung. Sputum viscid and rusty; pulse dicrotic. There was considerable delirium in this case, and a pronounced alcoholic history.

Twelve hours after the first dose of vaccine the temperature, which had been 103° F., fell to 101° F. Following the second dose it fell further to 100° F., rising to 101.2° F. in four hours. After the third dose it remained at 101° F., and fell after the fourth to 100.2° F.; six hours later it was normal, nor did it rise above this level during a brief convalescence. The pulse and respiration-rate began to fall after the third dose, on the seventh day of the disease. Sedatives were employed in this case on account of the delirium.

CASE III.

B. B., aged 37, male, was in hospital suffering from transverse myelitis, when he contracted acute lobar pneumonia. Pneumococci were found in the sputum, which was viscid and rusty.

In this case the temperature remained at 103.4° F. until after the third dose given on the fourth day of the disease, when it fell to 100.8° F. After the fourth dose it increased to 103° F., but came gradually to normal on the seventh day of the illness, and there were undoubted signs of resolution.

On the tenth day, however, the patient had retention of urine, and pus was found in the catheter specimen, and the temperature again increased to 101.2° F. By the fifteenth day all the signs of consolidation had apparently disappeared. The patient died on the twenty-second day from cystitis.

CASE IV.

J. T., aged 39, male, was admitted to hospital on the fourth day of the disease, with well-marked signs of consolidation in the lower lobe of the right lung. Pulse dicrotic: sputum viscid and rusty. History of alcoholism and considerable delirium.

After the first dose the temperature fell from 103.2° F. to 102.4° F., and fell further to 101° F. after the third dose, reaching normal after the fourth dose on the seventh day of the illness, and remained normal during convalescence.

It would seem that the advantages gained from this method of treatment are—a lessening of the toxaemia as evidenced by the gradual fall of temperature followed by a fall in the pulse-rate and respiration-rate, together with an improvement in the general condition of the patient, and an earlier abatement of the symptoms, lysis in each case appearing to supplant the crisis.

I am indebted to Dr. Coplans of Leeds University for the primary cultures of pneumococcus.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

BATH AND BRISTOL BRANCH.

THE sixth ordinary meeting of the session was held at Bath on April 30th. Dr. ROXBURGH, President, was in the chair, and twenty-eight members and visitors were present. Mr. C. E. S. FLEMMING read notes of *Some cases of acute oedema of the lung*, and the PRESIDENT, Mr. PAGAN LOWE, Colonel LEE, Dr. NEILD, and Dr. KENNEDY added other instances. Dr. G. H. H. ALMOND read a paper on the *Urinary products of intestinal intoxication*, which was discussed by the PRESIDENT, Mr. PAGAN LOWE, and Dr. NEWMAN NEILD. Mr. T. PAGAN LOWE read a note on *The physiological action of radio-active water*, and the PRESIDENT made remarks upon it. Dr. R. WATERHOUSE described a case, and showed the skiagram, of *Cervical rib*. It was discussed by the PRESIDENT, Mr. COSTOBADIE, Mr. LACE, and Dr. BOWKER.

SOUTHERN BRANCH: PORTSMOUTH DIVISION.

A CLINICAL meeting was held on April 22nd, when Dr. LYSANDER MAYBURY was in the chair and thirty-three other members were present. Dr. HILDA CLARK, in opening a discussion on *The practical application of tuberculin treatment*, emphasized the importance, in summarizing experience, of considering its relation to the natural production of immunity to tuberculosis and the influence of environmental factors, and suggested that this could best be done by grouping cases treated according to the clinical condition regarded as a whole, and not only by the anatomical extent of the disease. To this end she had tabulated a complete series of consecutive cases of adult pulmonary tuberculosis treated to a greater or less extent by the intensive dose method. Tubercle bacillus was present in 181 cases and absent in 210. Each set was subdivided after careful consideration of the history, the nature of the onset, and progress of the disease, and the condition, general and local, when treatment began. After an account of the preparations of tuberculin used—that is, PTO, PT, OT, TAF, PBE, and BE, and of the technique of administration—Dr. Clark gave an account of her experience and conclusions with regard to dosage, intervals, and special preparations in these different types of cases. The practical application of tuberculin treatment was first and foremost, in our present state of knowledge, to early cases, in the vast majority of which her experience showed that it could be used safely and successfully as the main method of treatment. She also showed that the temporary improvement obtained by tuberculin alone in many advanced cases, together with the complete arrest of the disease occasionally obtained even in severe cases, led to the conclusion, suggested by Koch in 1890, that, combined with sanatorium treatment, if sufficient time could be given before the patient had to return to bad conditions, a higher percentage of cases of permanent arrest of the disease might be expected than with sanatorium treatment alone. She emphasized the necessity for allowing time for the completion of the arrest of the disease after the production of immunity had been initiated by any method of treatment adopted. A discussion followed, in which several members joined.

DR. W. BRYCE ORME, formerly medical officer at Larut, Federated Malay States, has been appointed P.M.O. to British North Borneo.

THE third international congress on cancer research will be held in Brussels in August (1st to 5th). The subjects proposed for discussion are: (1) The use of physico-chemical measures in the treatment of cancer and the use of chemical substances after radical operations; (2) vaccination treatment of tumours; (3) statistics of cancer, its local distribution; (4) organization of institutions where cancer patients can be treated; (5) nursing of cancerous patients and instruction in this subject; (6) report on the position of cancer research and the struggle against cancer in various countries, including special literature for doctors, leaflets of instruction for lay people, etc.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

RESUMED DEBATE ON ALIMENTARY TOXAEMIA.

Monday, May 5th, 1913.

DR. AMAND ROUTH in the Chair.

PROFESSOR H. J. HUTCHENS (Newcastle) said he understood by the term "alimentary toxaemia" the circulation in the blood of certain poisons elaborated in the alimentary canal, which would combine with and to a certain extent injure the cells of the body for which they had a chemical affinity. These substances might be elaborated either chemically—by the action of digestive juices acting on the foodstuffs—or as the result of the activity of bacteria. The poisons produced by the bacteria in the alimentary tract might be of two kinds: (1) The specific poisons of the bacteria themselves; or (2) the non-specific products manufactured by bacteria. Outside the body the colon bacillus produced indol, which was not a specific toxin of the colon bacillus. There were two schools of thought: the one maintained that certain bacteria were essential to animal life, that they broke up the food so that it could be more readily absorbed, and that they protected the body against pathogenic species; the other school, led largely by the French, said that bacteria were altogether harmful, and that the digestive juices in the animal sufficed to elaborate the products necessary for the maintenance of life. They pointed out that it was mainly in the large intestine that bacteria were found, where practically no digestion took place, and the organisms found there were productive of the sclerotic changes characteristic of old age. These were largely hypotheses, and there were but few facts to support them. In many cases of gastric disturbance following alimentary toxaemia the colon bacillus was present in the urine when not suspected.

Sir JAMES GOODHART considered that more diseases were attributed to oral sepsis and pyorrhoea alveolaris than was justifiable, and he agreed with Professor Keith that the question of alimentary toxaemia centred round the nature and functions of the colon. But he did not consider the physiological arguments which had been used altogether sound. Though it had been shown that some people could apparently get along in comfort without the large bowel, he believed the colon had been gradually elaborated and was a great organ of digestion. It had been said that the colon absorbed little beyond water; but he believed that its function was to display to the food passing through it the greatest extent of surface possible. The colon should be full, not empty; satisfied, not hungry. Yet it had been grafted into the minds of the profession and the laity that the one object in life was to get the bowels opened once a day, and failing this, there would be poisoning by noxious products. But the function of delay to facilitate absorption must be borne in mind, and every kink in the large intestine must not be regarded as a source of pathological obstruction,

Mr. W. LANG's thesis, which he set out to establish by showing tables of large numbers of cases, was that pyorrhoea alveolaris and other septic conditions in the upper part of the alimentary tract were answerable for inflammations in every part of the eyes. In many of the cases he could not discover the nature of the poison, but the improvement which immediately followed upon removal of the septic source convinced him that his suspicion was correct. In some cases of choroiditis lost vision quickly returned when these measures were taken. He had notes of 10,000 private cases, the results in which were properly comparable, as he examined them all himself. Septic cases were, of course, very common among hospital patients, but even among private patients some of the results were striking. He showed photographs of septic gums, and described the *modus operandi* of the infection of the visual apparatus.

Dr. DAVID SOMERVILLE said that many people at and past middle age consumed excessive quantities of protein—that is, more than they could properly oxidize or assimilate. The lassitude, headache, drowsiness, irritability, etc., were accompanied by abnormal physical and chemical changes in the urine, and frequently by increased

arterial tension. The surface tension of the urine was lowered; it contained increased indol, skatol, and aromatic acids, and the proportion of ethereal to preformed sulphates was increased, as well as the ratio of the ethereal sulphates to the total nitrogen. Many patients were greatly improved when they substituted carbohydrates for proteins in their diet. The most important matter was, not what happened in the alimentary canal, or what bodies were found in the urine, but what was constantly happening in the intermediate body tissues.

Dr. A. C. JORDAN again stated his position in regard to the question of ileal and other kinks and obstructions, and showed a number of striking skiagrams bearing on the subject. He insisted that his opinion, founded upon *x*-ray examination, was constantly being put to the test by operation, and it was the rule for his findings to be verified. He did not find ileal kinks except in patients whose duodenum was distended and who presented clinical exidences of toxaemia.

Mr. ERNEST CLARKE contended that the eye registered, in a delicate manner, certain conditions of the system, and intestinal toxaemia was one of them. The condition of the lens was a very good index, for the degree of its "squeezability" decreased not only naturally with age, but prematurely as the result of disease, so that more and more assistance was needed to enable the possessor to see near objects. He had records of over 3,000 cases, which he had plotted on a chart to show the age of the patient and the accommodative power of the lens. For instance, the lens of one man, aged 40, had the accommodative power of a man aged 55. Conversely, regular habits and a healthy life resulted in preserving the resiliency of the lens long beyond the normal period. He had marked in a number of cases a very distinct rejuvenation of accommodative power when intestinal stasis had been efficiently treated.

Dr. F. LANGMEAD dealt specially with the relation of the thyroid gland to the condition of alimentary toxaemia. Tetany was supposed to be due to toxins generated in the alimentary canal; it disappeared if the stomach were washed out. It was common in rickety children, in whom it was usual to find some dilatation of stomach. It was sometimes treated with success by the administration of thyroid extract. Infective arthritis was not uncommonly accompanied by enlargement of the thyroid, or by Graves's disease, or by tetany. In rheumatoid arthritis great improvement had been noted to follow short-circuiting, and also the giving of thyroid extract. He had observed great improvement in cases of enlargement of the thyroid from the use of a vaccine prepared from the coliform bacilli from the patient's own bowel. In one case the goître entirely disappeared, and in all the others the gland had diminished in size.

Dr. J. M. H. MACLEOD observed that though many skin conditions had been attributed to food toxins and the aberrant products of digestion, the assumption was only warranted at present in respect to a few, including urticaria, toxic erythemata—that is, erythema multiforme, rosacea, and the acneiform eruptions of adolescence, especially in women. In many cases the harm resulting from the ingestion of certain kinds of food was due to the patient's idiosyncrasy. The primary attack of urticaria was often a sequel of gross dietary error, but thereafter a very small quantity of that food would cause a return of the eruption. The toxic erythemata were polymorphic, and their pathogenesis was not certain, though some thought they were a consequence of a toxin acting on the walls of the blood vessels.

Dr. E. VON OFENHEIM said that stasis caused bacterial poisons to be formed, which had a paralysing effect on the intestines. In stasis the organisms were in a condition which indicated that they were in an unusual environment, the changes being similar to those seen in overgrown cultures. Only about a fifteenth of the attempts to make cultures from the faeces in these circumstances were successful as compared with those from the faeces of normal healthy people.

Mr. S. H. BROWNING remarked that certain eye conditions were cured when certain alimentary conditions were remedied, and that seemed the only ground to go upon at present. Considering the wide prevalence of pyorrhoea alveolaris, it was surprising that such a small percentage of cases suffered from eye disease; he thought the reason was that eye conditions occurred when a particular form of organism was present in the gum condition. He had been struck with the frequency of pneumococcal infections in this connexion, and this organism was the least common in pyorrhoea except *Staphylococcus aureus*. The treatment of pyorrhoea lay chiefly with the dentist, but cure could be greatly accelerated by the use of vaccines. He had noted the frequent association of asthenopia with pyorrhoea, and he regarded this as a valuable early indicator of alimentary intoxication. The tonsils were a frequent source of alimentary toxaemia, and the eye condition most often associated therewith was irido-cyclitis. Sometimes removal of the tonsils cured the eye disease. In many cases the result of treating the eye condition by means of attention to the intestinal canal had been unsatisfactory, but there was sufficient encouragement to warrant a systematic examination of the excreta.

CLINICAL SECTION.

AT a meeting on May 2nd, Mr. WALTER G. SPENCER, Vice-President, in the chair, the following were among the exhibits:—Dr. F. PARKES WEBER: Old quiescent *Zoniform scleroderma* of the right lower extremity. The patient was a woman, aged 44, the disease having been first noticed when she was aged 11 or 12. There was a hard depressed band, feeling like a cicatrix, in the subcutaneous tissues. It partly encircled the upper part of the thigh and extended downwards to the inner side of the knee. Dr. FILIP SYLVAN: *Pulmonary tuberculosis after gymnastic treatment.* The man, aged 24, had extensive disease of the lungs, which Dr. Sylvan thought had been arrested after ten weeks' treatment. Dr. G. H. HUNT: (1) *Complete heart-block* in a woman aged 22. It had caused no symptoms. The pulse-rate was usually about 30 per minute. The etiology was uncertain. (2) A case illustrating *Prognosis of extra-systoles.* It was that of an athletic man aged 23. With a dilated heart, ventricular extra-systoles had been present. The dilatation improved and the patient returned to vigorous exercise. This caused the extra-systoles to disappear. Mr. PHILIP TURNER: *Renal calculi in both kidneys* of a woman aged 42. The left kidney had been exposed and a calculus weighing, when dried, 4 oz. and several smaller ones were removed. Four weeks later seventeen calculi and a number of small ones were removed from the right kidney. The patient made good progress. Mr. J. G. SANER: (1) *Congenital lipoma* of the sole of the foot with hypertrophy of the second and third toes in a child aged 2. (2) *Congenital hypertrophy* of the right leg with scoliosis in a girl aged 13. There was a general naevoid condition of the skin. Mr. R. J. PYE-SMITH read a short paper on *Arsenic cancer*, with notes of a case. It was illustrated by a photograph and microscopic slides. The case occurred in a woman who had been treated for some years for psoriasis probably by arsenic, hyperkeratosis resulted, and later epithelioma. The probable sequence in such cases was hyperkeratosis, fissuring of the heaped-up areas, and finally epithelioma. The condition had been described by Sir Jonathan Hutchinson.

SECTION OF DISEASES OF CHILDREN.

AT a meeting on April 25th, Mr. A. H. TUBBY, President, in the chair, the following were among the exhibits:—Dr. J. L. BUNCH: Two cases of *Hereditary syphilis* treated by intravenous injections of salvarsan and neo-salvarsan—(1) A child, aged 2, who was given 0.03 gram of salvarsan at 8 weeks old; (2) a child, aged 3 months, to whom, when aged 5 weeks, 0.04 gram of neo-salvarsan was administered. Both had benefited considerably by the treatment. Dr. J. PORTER PARKINSON: *Tuberculosis of the kidney* in a boy aged 8. The diseased kidney was palpable. Tubercle bacilli were found in the urine. Mr. R. H. A. WHITELOCKE: A successful case of *Cerebral decompression* for convulsions. It was of a boy aged 4. The chief points were: (1) The unascertained cause of the illness, no lesion having been found; (2) the one-sided limitation of the spasms, with at first no loss of consciousness; (3) the complete cessation of the fits so soon as intracranial pressure was relieved by the operation; and (4) the complete and rapid restoration to health. Also *Enlargement of the thyroid gland* in a family of five

children—four boys and a girl. The disease existed in all the children of the family, the parents being exempt. One case was congenital. The thyroids enlarged in all the children, whether they lived on bracing and high ground or in a low-lying and damp watershed. Dr. H. MORLEY FLETCHER: *Cachexia strumipriva* in a girl aged 13. A small tumour had been removed from the neck, at the level of the thyroid cartilage, when she was aged 7. This proved to be thyroid glandular tissue. The physical evidences of myxoedema had not improved under thyroid therapy, but the mental state was good. Dr. E. A. COCKAYNE: *Distal myopathy* in a boy aged 6. The boy was small for his age and showed great wasting of the glutei and of the muscles below the knees. It did not fall in any definite group of the myopathies. Dr. E. BELLINGHAM SMITH: *Congenital absence of abdominal muscles* in a baby aged 2 months. The abdominal wall showed many linear grooves, and the navel was slit-like. The right leg was kept slightly flexed at the hip-joint and knee-joint. There were genu valgum and talipes calcaneo-valgus on both sides. A faint systolic murmur was heard over the cardiac apex. Dr. J. D. ROLLESTON: *Diphtheria of the œsophagus.* A membrane was found about 1½ in. from the cardiac orifice and small patches below it. There was a membranous inflammation also of the naso-pharynx, larynx, and trachea. Mr. WHITELOCKE recorded two successful cases of operation for *Strangulated inguinal herniae in female infants* of the ages of 22 and 17 days respectively. The special features of interest were: (1) The early age at which strangulation occurred without definite cause; (2) the unusual hernial contents, in one case an ovary and tube as well as small intestine, in the other an unduly mobile caecum with a large appendix; (3) the successful issue in each case, even after the obstruction and symptoms of strangulation had lasted for over three days; (4) the absence of post-operative shock, after a general anaesthetic and herniotomy, and in the younger of appendicectomy also. Mr. Whitelocke also described a case of pseudo-meningitis, in which the symptoms were caused by the escape of threadworms into the peritoneal cavity through a perforated appendix.

BALNEOLOGICAL AND CLIMATOLOGICAL SECTION.

IN the account of the discussion on the etiology and treatment and other aspects of high blood pressure, on April 17th, which was given at page 940 of our issue for May 3rd, Dr. Bezley Thorne was represented as having said that in the course of fifteen observations he had never known digitalis to raise blood pressure. In reality, however, he spoke not of fifteen single observations, but of fifteen years of observation.

MEDICAL SOCIETY OF LONDON.

Monday, April 28th, 1913.

Mr. A. E. BARKER, Vice-President, in the Chair.

The Treatment of Arterio-sclerosis and High Tension.

DR. DE HAVILLAND HALL, in introducing a discussion on this subject, said that the Registrar-General's reports showed that among males 45 to 65 years of age there had been an actual increase in the death-rate of late years, and that between the ages of 55 and 65 one-third of the total deaths were due to diseases of the heart and blood vessels. Dr. Hall discussed the various conditions causing arterio-sclerosis, such as the increased physical and mental strain of modern life and the increase in the consumption of tea, coffee, and tobacco, and he alluded to the influence of alcohol and syphilis. Under the head of treatment the necessity of relieving mental strain was insisted upon. Autointoxication was considered to play a very important rôle in the production of arterio-sclerosis. Directions were given as to diet. In advanced cases meat and soups made from stock were prohibited; a milk and vegetable diet was recommended. Attention to the quantity as well as to the quality of the food was advised. Special directions were necessary should the patient be obese. The amount of tea, coffee, and tobacco consumed must be strictly limited. Alcohol was to be abstained from, if possible. An abundant supply of distilled water for drinking was recommended. Turkish and electric light baths had a beneficial action, but must be ordered with caution. The desirability of exercise in the open air was insisted upon; failing sufficient exercise massage was a useful substitute. In the event of an enlarged prostate causing trouble prostatectomy was advocated. Oral sepsis required to be treated. Stress was laid upon the necessity for daily action of the bowels and of the advantage of an occasional dose of calomel or blue pill. Potassium iodide was stated to be the drug most generally useful in cases of arterio-sclerosis associated with high tension, and it might be necessary to continue its use in small doses even for years. The addition of bromide to the iodide was especially useful in the high tension so common at the menopause. Iodides were contraindicated in cases of low tension and failing compensation, and in these digitalis and strophanthus were useful. Small doses of thyroid extract had given excellent results in obese patients with high tension. Mention was made of the hippurates, guipsine, and Trunecek's serum (antisclerosin) in the treatment of arterio-sclerosis. The speaker was of opinion that in the past the more powerful vaso-dilator drugs had been indiscriminately and injudiciously employed. It must be realized that high pressure was an effort of Nature to maintain the balance of the circulation under adverse circumstances, and that it should not be interfered with, unless there were reasons, such as anginal pains or headache, to justify the employment of these drugs. The abstraction of blood by leeches or venesection was highly commended in suitable cases. Spa treatment and the Nauheim system of treatment were briefly alluded to.

Sir LAUDER BRUNTON said he had been accustomed to regard arterial tension as almost entirely depending upon the force of the heart in propelling blood and the resistance opposed by the capillaries to its onward flow, this resistance depending almost entirely upon the greater or less contraction of the arterioles or capillaries. He had, however, neglected too much the viscosity of the blood as a factor in raising blood pressure. It had been found by Determann and Weil that the viscosity depended upon the number of formed elements within it, and that its viscosity could be roughly estimated by their enumeration—a distinctly easier method than that of employing the viscosometer. It appeared to him that in future they must direct their attention, not only to the power of the heart and contraction of the vessels, but to the viscosity of the blood.

Dr. A. P. LUFF referred to the relation of strain, increased pressure, and toxic agents to arterio-sclerosis and high tension. He drew attention to the fact that the two terms were not necessarily synonymous, as in many cases of gout in elderly persons arterio-sclerosis occurred without high tension, provided that contracted granular kidneys did not exist. On the other hand, the very highest pressure might be present with quite moderate thickening of the vessels. The most important factor in treatment was to diminish the production of toxins in the gastro-intestinal tract and their absorption therefrom, which was effected by ensuring a free action of the bowels and a reduced consumption of meat and alcohol. Potassium iodide and sodium nitrite were most valuable for the reduction of tension, but vaso-dilators should not be used in cases of advanced arterio-sclerosis, as in such a high arterial pressure was essential in order to maintain a sufficient circulation of blood through the tissues.

After further discussion by other members, Dr. DE HAVILLAND HALL replied.

LIVERPOOL MEDICAL INSTITUTION.

AT a meeting on April 24th, Mr. ROBERT JONES, President, in the chair, Dr. GARDNER-MEDWIN described a case of *Malta fever* in a patient who had never been in Malta and who had no history of having taken goat's milk. The *M. melitensis* was isolated from the urine. The patient had jaundice. Mr. R. C. DUN recorded 220 cases of *Hernia* operated upon in the out-patient room, the children being sent home the same night. There had been no mortality, and in all cases under 1 year of age there had been healing by first intention. In two cases there had been suppuration; one had a stitch abscess; the other had broken down on the tenth day, apparently from infection, when the stitches were removed. For preparation of the skin 2 per cent. iodine in chloroform was used. He divided the sac

high in the canal and used a stitch to pull the pillars of the ring together. A mattress subcuticular suture was used to draw the wound together. There was no dressing beyond flexile collodion. The child was put on a Thomas's hip splint to keep it at rest. The operator thought 3 months the best age at which to operate. Professor J. M. Beattie, in a paper on *Relapses in acute rheumatism*, said some relapses were probably reinfections from the throat, but might be due to survival of the infection in the synovial membranes. In 89 *post-mortem* examinations in which the joints were examined bacteriologically, 60 had sterile joints. In 12 there were putrefactive organisms or staphylococci, in 17 diplococci or streptococci. Of the 10 streptococcal cases 9 had a definite rheumatic history. In all definite rheumatic cases an organism could be isolated from synovial membrane of joints; the organism could be grown outside the body, and was still capable of producing rheumatism if kept even for three years. Slides were shown illustrating the effect of the injection of cultures and of cold air on eleven rabbits that had been injected. The injection produced joint trouble which tended to disappear, but exposure to cold would cause relapses. Treatment by salicylates should be continued during the apyrexial period with a view to preventing relapses. Not much was to be hoped from vaccines during the acute periods, but they might be of service during the latent condition of the disease. Sir James Barr considered mechanical strain was of importance in determining the site of the attack. Dr. T. R. Bradshaw thought that treatment by salicylates was not pushed far enough nor continued long enough to prevent cardiac lesions. He agreed that vaccine treatment was of no use in the acute stage. Dr. Percy Marsh had used an antistreptococcus vaccine in treating children, but had given it up. Dr. John Hay found it hard to satisfy himself that there was any useful treatment except rest and the salicylates. Professor Beattie, in reply, said he had not treated rabbits with salicylates. He had seen chorea in one rabbit, and an organism had been isolated from the spinal cord. Watering the floor of the animal room produced relapses. He thought the organism was an inhabitant of the alimentary canal, and the infection probably came, in many cases, from the mouth and tonsils.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

At a meeting on April 18th, Dr. Dobson, President, in the chair, the following were among the exhibits:—Dr. Watson: A case of *Heart-block* in a man of 60. For some weeks the condition had been looked upon as being one of complete heart-block. The pulse varied from 22 to 26 per minute, and was regular in rate and force. There were practically no symptoms beyond dyspnoea on exertion and dizziness. He was treated with potassium iodide in 7-grain doses with small doses of liquor morph. three times a day. After a few days the pulse-rate jumped to 44 per minute, and afterwards to 72 to 76 per minute. Whenever the pulse-rate altered in frequency the patient experienced a momentary sensation of faintness. Dr. Wardrop Griffith: A woman in whom he had diagnosed *Patency of the ductus arteriosus*, and in whom the condition was complicated by acquired mitral disease. Mr. A. L. Whitehead: A case of *Congenital "pit"* at the right macular region; he explained its developmental origin. Dr. R. A. Veale: (1) A man with an *Arthritis of the elbow-joint* of doubtful causation, which had given rise to ulnar nerve paralysis. Rapid improvement was taking place with massage and electricity. (2) A case of *Hydroa aestivalis* in a boy aged 4 years. He pointed out the seasonal incidence of the disorder, and mentioned its rare occurrence. Mr. J. F. Dobson: Two cases of *Intestinal stasis with rheumatoid arthritis* in whom he had performed ileo-sigmoidostomy. After the operation there was almost immediate improvement in both the general health and in the local condition of the joints. Dr. C. W. Vining: Two cases of *Para-syphilitic disease of the nervous system*. In his remarks Dr. Vining emphasized the importance of accurately differentiating between tertiary syphilis and para-syphilis. In the former case treatment was necessary and usually effective; in para-syphilis, no treatment as a rule was of avail.

At a meeting on May 2nd, Dr. Dobson, President, in the chair, the following were among the exhibits:—Dr. J. G. Greenfield: Sections exhibiting *Subacute combined degeneration of the spinal cord*. Mr. S. W. Daw: (1) A case of severe *Rickety deformity of the legs* in a girl of 17. The patient had been unable to walk up to the time of operation. Osteotomies of femur, tibia, and fibula on both sides were performed, followed by rectification and fixation in splints. Now, one year later, the patient could walk well and was able to earn her living. (2) A case of double *Congenital talipes equino-varus*, previously treated and relapsed. Over-correction with Thomas's wrench was performed, followed by fixation in plaster for many weeks. The patient can now walk well, correction being temporarily maintained by a simple apparatus. Dr. Wardrop Griffith described the case of a young man with extensive *Sarcomatosis*. On admission there was a flaccid paraplegia, with abolition of superficial and deep reflexes, partial anaesthesia, and some loss of control over the sphincters. There was slight retraction of the head, with great stiffness of the neck. Facial paralysis of Bell's type on the left side, with some deafness, was present. There was enlargement of the liver and spleen and well-marked optic neuritis. Under the skin of the abdomen many small purple tinted growths, varying in size up to a small lentil, were found, and under the skin of the scalp a great many masses were found which were not movable on the cranium. The diagnosis of sarcomatosis, originating probably in one or other of the bones, was confirmed by Dr. Stewart's examination of the blood and cerebro-spinal fluid.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

At a meeting on April 16th, Mr. W. G. Laws, President, in the chair, Mr. Lyn Dimond read a paper on *Colloids in medicine and physiology*. Their absorption depended on surface and tension. Among other therapeutic cases they had been employed in the treatment of malignant disease. Mr. Alex. R. Tweedie gave a demonstration on the *Functions of the labyrinth and cerebellum*, based on the methods of Bárány and Ruttin, and illustrated by the diagram evolved by the former observer. The physiological phenomena associated with induced vertical nystagmus and the effect on vertical and horizontal co-ordination under the influence of rotation with the head erect were first shown in a normal subject. Two patients were then utilized to demonstrate the variations of these phenomena under pathological conditions, both the rotatory and cold caloric tests being employed. One of these patients had been operated on for caries of the labyrinth and the other for extensive suppurative disease of the middle ear coupled with cerebellar abscess. Incidentally the uses of Bárány's "noise apparatus" could be well shown in both these patients as in each the cochlear nerve on the diseased side was functionless. Allusion was also made to the puzzling transitory effects of disseminated sclerosis in simulating labyrinthine and cerebellar lesions in certain cases.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

At a meeting on April 9th, Dr. Walter Swayne, President, in the chair, Mr. E. H. E. Stack, in a demonstration on some varieties of arm splints, advocated the use of a malleable metal anterior angular splint for the treatment of *Fractures of the forearm*. For all injuries about the elbow-joint he had found the position of acute flexion to give the best results, and demonstrated a simple method for putting up an arm in that position. He advocated the early use of active rather than passive movements, the patient being better able to judge the amount of movement possible without risk of damage. Mr. Charles Corfield, in a paper entitled *What is an accident?* pointed out that it was impossible to give a satisfactory definition, but that each case must be decided on its merits. Such diverse conditions as lightning stroke and anthrax had been adjudged to be accidents within the

Workmen's Compensation Act; on the other hand, a case of sewer gas poisoning was ruled to be outside it. Dr. PARKER suggested that as a doctor was only expected to use ordinary skill and care, so an accident should only be so adjudged if it would similarly have affected a person in an ordinary state of health. Mr. STUART V. STOCK related two cases in which death from heart failure occurred two or three days after an operation in patients the subject of fatty heart, although they had shown no bad signs during a prolonged *Administration of an anaesthetic*. Mr. A. RENDLE SHORT, in a paper on the nature of *Surgical shock*, pointed out that the two great objections to the generally accepted vasomotor fatigue theory of Crile and Mummery were that the peripheral vessels were found to be constricted and not dilated, and that the centre could be shown experimentally not to be exhausted. He had examined the venous blood of a number of patients the subjects of shock, but had been unable to confirm the theory of Yandel Henderson that shock was due to a deficiency of CO_2 in the blood. His own view was that the symptoms were due to a loss of fluid from the blood; it apparently passed out into the tissues and was possibly squeezed out by vasomotor reflexes.

LONDON DERMATOLOGICAL SOCIETY.

AT a meeting on April 15th, Dr. M. DOCKRELL in the chair, Dr. KNOWSLEY SIBLEY, in a paper on *Electrical procedures in diseases of the skin and mucous membranes*, dealt with some of the more recent treatments under the following headings: (1) Electrolysis, in which connexion he described the process of removing sebaceous cysts by two copper needles; (2) ionization, especially for the cure of lupus vulgaris and the absorption of scar tissue; (3) high frequency currents for the treatment of pruritus ani et vulvae, haemorrhoids, etc.; (4) *x* rays, under which he described the most appropriate doses for the cure of many chronic skin diseases, such as eczema, psoriasis, lichen, etc.; and (5) radium, on which he spoke at greater length, giving the various methods of application and dosage, together with a description of some of the skin diseases which give the most satisfactory results from treatment by radium, such as rodent ulcer, naevus, keloid, etc. Finally, he compared the treatments by radium with those of *x* rays, and detailed the advantages and disadvantages of the one with the other. The cases shown during the evening included the following:—Dr. BUNCH: (1) A case of *Scleroderma* in a man aged 25, with marked keratosis of the palms, considered to be possibly due to arsenic. It was proposed to treat the case with thyroid extract. (2) A case of severe *Tertiary ulceration* of the buttocks in a married woman aged 25 years, who gave a history of considerable haemorrhage from these ulcers about each menstrual period, her normal catamenia being absent for fifteen months. (3) A case of *Pityriasis rosacea* in a man aged 35 years. Dr. SIBLEY: (1) A boy, aged 6, who had suffered since 8 months of age with a severe *Generalized irritable eczema*, accompanied with enlarged glands in the femoral region, and therefore resembling in some respects prurigo. (2) A boy, aged 6 years, sent him by Dr. McHugh, with apparently a very extensive psoriasis on an icthyotic skin. Dr. GRIFFITH: Specimens of growths of two varieties of the fungus of *Ringworm* which varied in colour, some growing pinkish and some white.

IT is stated by the *Journal of the American Medical Association* that a lady has given £130,000 for social welfare laboratories to be conducted by the New York Association for Improving the Condition of the Poor. In the laboratory are to be studied questions relating to public health and hygiene, the welfare of school children, and the food supply. Among the subjects to be investigated are the ventilation of school and other public buildings, and for this purpose a committee of experts will be organized to conduct research and experimental work. The subcommittee on food supply will make investigations concerning the scientific production of various articles of food, its purchase in larger quantities, its scientific storage, its efficient and honest handling, and the latest facts as to relative food values, with the object of ascertaining how the cost of food to the consumer may be reduced and its nourishing qualities increased.

Reviews.

DISEASES OF WOMEN.

THE call for a new edition shows the attractiveness of the older form of the book which now appears as *Diseases of Women*,[1] by HERMAN and MAXWELL. This attraction—and it is a great merit—lay in the skill and emphasis with which Dr. Herman presented the subjective as well as the objective side of his cases. The intimate individual note struck in a book written from the personal experience of the author had also its advantages, but in the preface to this new edition Dr. Herman acknowledges that it has defects in the treatment of operative gynaecology, and he has called in the assistance of Dr. Drummond Maxwell whose name appears on the title page. The impression left on the mind, after comparing the methods of operation as described and illustrated in the older editions and in this, is that it would have been well to have given Dr. Maxwell rather more scope. The added figures and the descriptions of newer methods materially increase the value of the book as a general manual. In the description of abdominal hysterectomy for cancer the method given for recognizing the ureter is not so certain as its recognition by vision on the inside of the peritoneal flap when this has been incised and pulled inwards. The description of ovariotomy hardly differs from that of the first edition, and the dressing with iodoform is neither so simple nor so good as some of the modern methods. The "index of authorities" is not so useful as a moderate bibliography would be, and the preponderance given to the *Transactions* of the London Obstetrical Society lends a somewhat restricted air to the volume, which, though its descriptions perhaps represent the natural history of diseases of women before rather than after the present surgical era, is on the whole a very interesting and useful book.

The most recent appearance among the ranks of English authors on the subject of gynaecology has been made by Dr. T. G. STEVENS, who, in his *Diseases of Women*,[2] has produced a work which, without presenting any particularly striking feature, may certainly claim to be regarded as a good textbook, in which the student and practitioner will find much valuable information. The author points out that, as far as the present limit of knowledge allows, the subject is nowadays to be dealt with on a pathological basis and that it has been brought into line with other branches of surgery, with the result that much of the mystery which at one time appeared to surround diseases peculiar to the female has been dispelled. Perhaps the most noticeable feature is presented by the photomicrographs. The author has considered it necessary to apologize for these in the preface. To our mind no such apology is necessary, as they are excellent. They are obviously taken from actual sections and are not spoilt by any attempt to alter them into diagrams—a process which is frequently adopted, although the result of so doing is not always an increase of utility. The manual presents a genuine attempt to deal with the subject in an up-to-date manner. All prehistoric theories have been suitably treated by omission, and only such are put forward for consideration as have some support in fact. The chapters on menstruation and its anomalies are well written in a short space; much well worth reading is said. It is, however, difficult to be absolutely in agreement with the author as to the great importance to be attached to the part played in this connexion by the salts of calcium. In many gynaecological manuals it is the custom to regard an alteration in the position of the uterus as of such serious import that it might be gathered from them that most of the ills to which the female flesh is heir have their origin in such a malposition. The author has handled this subject rationally and the treatment suggested is well considered. The language of the

[1] *Diseases of Women.* A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman, M.B., F.R.C.P., F.R.C.S.Eng. Enlarged edition, revised by the author, assisted by R. Drummond Maxwell, M.D., F.R.C.S.Eng. London: Cassell and Company, Limited. 1913. (Med. 8vo, pp. 914, plates 8, figs. 292. 25s. net.)

[2] *Diseases of Women.* By T. G. Stevens, M.D., B.S.Lond., F.R.C.S.Eng., M.R.C.P.Lond. London Medical Publications. London: Hodder and Stoughton, and Henry Frowde. 1912. (Demy 8vo, pp. 445; figs. 202. 15s. net.)

book is concise; it is well printed and the text interspersed by numerous illustrations, which are not only interesting but useful.

Nine years have elapsed since the appearance of the sixth edition of LEWERS's *Textbook of the Diseases of Women*.[3] The seventh, as was only to be expected, contains much new matter, and is published in a well-printed volume. The author has added much matter respecting radical operations in cases of cancer of the uterus, and states that he has witnessed Professor Wertheim performing the operation with which his name is associated. Dr. Lewers figures the table and instruments rather than the stages of this procedure. He rightly warns the operator to set the ureters sufficiently free so as to permit of their being held out of the way as required, but not to strip them too clean, lest they should slough. It is questionable how far Wertheim's operation is suitable as a method to be taught in a textbook for "the beginner," who is mentioned in the second line of the author's introduction. Like some other experienced gynaecologists in this country, Dr. Lewers does not speak with enthusiasm about this radical method. He concludes that it is most successful in early cases, and admits that he has not had good results when the disease was advanced. More stress might have been laid on the danger of damage to the bladder, the results of which do not appear immediately. If free dissection be made beyond the immediate area of the uterus and appendages, it should be as much in the direction of the vagina as upwards. Dr. Lewers still prefers the supravaginal operation to panhysterectomy in the treatment of fibromyoma of the uterus. He rightly says little about myomectomy, which is a dangerous procedure unless the operator has special experience in operations involving the wounding of uterine tissue. Lastly, Dr. Lewers is quite to be commended in his observations on operations for the suspension of the uterus, most of which are unscientific and liable to prove complete failures. This distrust is supported, we may add, by much clinical and pathological evidence recently made public by M. Bazy in his article on the after-results of such operations in the *Revue de gynécologie*. Thus Dr. Lewers's new edition is quite up to date, and the author cannot be blamed for writing somewhat vaguely on the merits of certain new methods which are certainly radical but not so surely surgical.

MARTIN and JUNG are deservedly popular with teachers and students in Germany on account of their *Pathologie und Therapie der Frauenkrankheiten*. It is a concise sketch of its subjects. There is a great demand for German medical works in the United States, and Dr. Henry Schmitz has prepared a translation under the title *Pathology and Treatment of Diseases of Women*.[4] Firstly and above all, as far as the British and American readers are concerned, it is published in the English language by a writer conversant with the German tongue as well. Thus an excellent textbook is available for those whose mother tongue is English. It is compactly bound in cloth boards, and the type is large and clear; the illustrations are not so satisfactory. There are a few fairly good coloured drawings in the original fourth edition (1907), such as Fig. 132, representing a surface carcinoma of the corpus uteri, and Fig. 185 showing a uterus presenting the changes due to perimetritis, but both, especially the latter, come out poorly in this translation. Moreover, some of the plain illustrations of diseased structures, which were rough in the original, are not improved in the translation. Fig. 181 representing a parovarian cyst, compares very unfavourably with the beautiful drawings of tumours of that type in certain well-known books published in the translator's country. Relatively speaking, the microscopical drawings come out better. The translation is a faithful rendering of the original handbook, and will be of great use to those who, ignorant of the German language, desire to know the teaching of a distinguished German gynaecologist and his opinions on asepsis and radical operations.

[3] *A Practical Textbook of the Diseases of Women*. By Arthur H. Lewers, M.D.Lond., F.R.C.P.Lond., Senior Obstetric Physician to the London Hospital. Seventh edition. London: H. K. Lewis. 1912. (Demy 8vo, pp. 550, illust. 258, plates 18. Price 12s. 6d. net.)

[4] *Pathology and Treatment of Diseases of Women*. By A. Martin, Professor and Director of the Universitäts-Frauenklinik, and Ph. Jung, Professor and Oberarzt to the Frauenklinik, Greifswald. Fourth edition. Only authorized English translation, written and edited by Henry Schmitz, M.D., Professor of Gynaecology, Chicago College of Medicine and Surgery, etc. London: Rebman Limited. 1912. (Super. roy. 8vo, pp. 475; illustrations 187. 21s. net.)

MANUALS FOR HOUSE-SURGEONS AND DRESSERS.

THERE was a time when *Pye's Surgical Handicraft*[5] was the only book of its kind, and many of us remember with pleasure its quiet, modest aspect, its rather crude illustrations, and its old-fashioned chapter headings. Of late years it has had many rivals, but after a careful inspection we venture to think that the sixth edition of "Pye" can safely be trusted to hold its ground. Mr. W. H. CLAYTON-GREENE is responsible for the editing and to a great extent the rewriting of the book. He is to be congratulated on producing a thoroughly up-to-date accurate work without losing sight of the main purpose of the original author in 1884, which was to inculcate the acquisition of manual skill or handicraft. There can be no doubt that students are apt to be carried away with enthusiasm for brilliant operative work, and to pay less attention to everyday routine care of patients. We are satisfied that there is real need for such a book as this, if only to give dressers correct ideas of the things they have got to know. These things cannot be learnt by reading, they can be learnt only by direct frequent and diligent contact with the patient, but this book points the way. In Mr. Clayton-Greene's work nothing has been omitted. But we venture to think that the illustrations and descriptions of the "capeline" and "knotted bandage" for the head should be expunged. Soft gauze bandages are now so easily obtained that the hard inelastic material so difficult to apply neatly should be relegated to the past. We must also point out an inaccuracy in the description of the Macewen method of controlling the abdominal aorta. We agree that there is none better. The proper way to do it, however, is for the assistant to stand on a low stool at the patient's left side, with his right closed fist pressing just immediately to the left and above the umbilicus, the right arm being straight and rigid; there is no muscular effort demanded; the attitude of the assistant is that of a public speaker standing easy on the right foot with the left leg crossed in front; the left hand is free to feel the patient's left femoral if required. The book is handsomely bound, well printed, and profusely illustrated.

The house-surgeon generally finds the first few weeks of duty a trying time. He is suddenly placed in charge of a position of responsibility, and he makes the discovery that there are a great many practical matters about which he knows nothing. He is confused by the multiplicity of his duties and embarrassed by the assumption of those in contact with him that he really does know what he is about. *The House-Surgeon's Vade-Mecum*,[6] which Mr. RUSSELL HOWARD has written, will do much to relieve the fledgeling house-surgeon of his mental perturbation. If this little book lies handy he will find in it a short, succinct solution of every difficulty he is likely to meet with. The author is to be congratulated on the way in which he has contrived to include all the essentials of the really practical and everyday features of a house-surgeon's work and in resisting the temptation to flood the book with pathology and bacteriology. The chapter dealing with injuries and diseases of the urinary organs and the modes of handling them appeals to us as quite the best of its kind we have read. The section on septic conditions and burns is exceedingly well and concisely written. The author might have mentioned excision of carbuncle and the early removal under an anaesthetic of sloughs in cases of burns and scalds as methods of treatment which materially shorten the period of residence in

[5] *Pye's Surgical Handicraft*. Edited and largely rewritten by W. H. Clayton-Greene, B.A., M.B., B.C.Cantab., F.R.C.S.Eng., Surgeon to St. Mary's Hospital, Lecturer on Surgery in the Medical School. Sixth edition, fully revised, with some additional matter and illustrations. Bristol: John Wright and Sons, Limited; London: Simpkin Marshall. 1912. (Demy 8vo, pp. 611; figs. 329, plates 11. 12s. 6d. net.)

[6] *The House-Surgeon's Vade-Mecum*. By Russell Howard, M.B., B.S.Lond., F.R.C.S.Eng., Surgeon to Poplar Hospital, Assistant Surgeon, London Hospital. London: Edward Arnold. 1911. (Post 8vo, pp. 526; figs. 142. 7s. 6d. net.)

hospital. The diagram illustrating the Fowler position does not represent the best way of using this important adjunct to the after-treatment of abdominal cases; a photograph of a patient in the usual sitting posture with knees flexed would appeal at once to the reader. In this connexion we would like to call the attention of Mr. Russell Howard to a bed frame suggested by Mr. P. Paterson of Glasgow; this is hinged in two places, so that the upper half supporting the upper half of the patient from the hip joints upwards can be screwed up to any angle, and the knees can be similarly flexed by a second screw; the mattress is not a special one, but bends with the angles made by the bed frame. The chapter on anaesthetics is by Dr. Ashley Daly, and maintains the same level of concise practical statement without embellishment found in the rest of the volume. We can heartily commend this book to the notice of chiefs to put into the hands of their house-surgeons. We are satisfied that on its own merits it will readily make a place for itself.

In all works on surgery *Modern Wound Treatment and the Conduct of an Operation*[7] are subjects fully set forth, but Sir GEORGE BEATSON has been prompted to embody his views in a small handbook which is an expression of gratitude to Lister and reverence for his memory. The introductory chapter is a short outline of Lister's life and work. The principles of wound treatment are then discussed, and the various classes of organisms met with which the surgeon is most concerned are described. The plan of an operating theatre, the duties of the various people concerned with the operation, the preparation of dressings, the preparation of the patient and the operation area are all exhibited in accordance with everyday practice. Sterilization of the skin with iodine receives proper emphasis, but the other method described, requiring, as it does, no fewer than six steps, cannot be regarded as simple, and it might have been proper to mention that thorough scrubbing with hot soap and water of surgeon's hands and patient's skin is regarded by some operators as sufficient. In some hospitals the omission of a description of a method of preparing iodized or other form of sterile antiseptic catgut will be regretted, but as a whole this little volume is well suited for the use of house-surgeons and surgical nurses.

PHYSIOLOGY.

As Professor HOWELL says in his preface to the fourth edition of his *Textbook of Physiology*,[8] any author who undertakes such a task is confronted with the enormous output of experimental work in physiology. "The ever widening boundaries of physiological literature make it more and more difficult for any one individual to gain a familiar knowledge, not only of the highways but of all the many byways along which enthusiastic workers are following their investigations." Yet the place of the textbook in the student's career cannot be filled by a series of monographs dealing with each separate part of the subject, and each written by an expert thoroughly up to date in his subject. These monographs are required, and the teacher endowed with the power of popular exposition must, using them as quarries, construct the edifice required; a textbook which will not merely catalogue facts, but arouse interest, excite imagination, and lead the student to further sources of knowledge. How well Professor Howell succeeds is shown by the wide popularity of this book on both sides of the water. He has produced a thoroughly sound book, interesting and readable, and has kept it up to the mark in each edition. One of the most interesting chapters is that on reproduction, growth, and senescence. He says:

> The physiological evidences of an increasing senescence warrant the view that death is a necessary result of the properties of living matter in all the tissues, except possibly the reproductive elements; the course of metabolism is such that it is self-limited, and even if perfect conditions were supplied natural death would eventually result. We do not understand the nature of these limitations—that is, the ultimate causes of senescence.

If the Bulgarians include some 70 per cent. of all the centenarians in Europe, is it because they live on sour milk? We think not, but rather because they come of a long-lived breed and live a simple open-air life. If one of a long-lived breed of Englishmen would seek out as a mate some fair Bulgar the daughter of a family of centenarians, he might endow his children with more than the threescore years and ten now allotted to man. Strange things will happen when men turn their attention to the selection and breeding of human beings in place of big gooseberries.

Mr. ERNEST EVANS, Natural Science Master at the Technical Institute, Burnley, has written a volume entitled *The Student's Human Physiology*[9]—a first-year course in the practice and theory of the subject. He has also written *The Student's Hygiene* and *How to Study Geology*. What the value of the last of these books may be we do not know, but we cannot say that the volume before us shows the student rightly how to study physiology. A catalogue of facts may be crammed up, but is of little educational value. To write an elementary book of science is a most difficult task, and can, we believe, only be accomplished successfully by one who has worked as an investigator and learnt the breadth of view which comes from years of original work in his subject. Mr. Evans's book is suitable for a candidate to run through just before an examination. For ordinary examination purposes the information given is clearly set out. The illustrations are rather poor.

DISEASES OF THE MOUTH.

Diseases of the Mouth[10] (syphilis and similar diseases) is a translation from the German of Professor Dr. F. ZINSSER by Dr. STEIN of the New York College of Dentistry. The book is really an atlas of mouth syphilis, and is intended to be an illustrated aid in study and diagnosis; consequently the therapeutic side has not been taken up, nor have the diseases resembling syphilis received more than a short description dealing with the chief points in differential diagnosis. Since the main point of the book is to supply the need there exists for lucid and detailed instruction in the diagnosis of syphilis and similar diseases of the mouth, syphilis is accorded a far more detailed description. This includes introductory remarks on the *Treponema pallidum*, the Wassermann reaction, and spirochaetes which may be found in the sites of syphilitic lesions, and chapters on primary, secondary, tertiary, and hereditary syphilis, all written with special reference to the mouth. The two remaining chapters are devoted to diseases similar to secondary and tertiary syphilis in the mouth.

In reading those chapters one gets the impression that syphilis is very prevalent in Germany (p. 13). In Cologne, every year during the carnival time, the number of primary lesions in the mouth is especially great, and perhaps this accounts for the inclusion of all forms of hypoplasic teeth as syphilitic, and for the failure to recognize the septic element in the causation of leukoplakia buccalis. It is further suggested that numerous other irregularities in shape and position of the teeth (shark-like teeth, absence of teeth, microdontism, etc.) can be traced to hereditary syphilis. Certainly, if the same standard of diagnosis were applied here in England, many grievous errors in diagnosis would be perpetrated.

The author thinks the tooth-hypoplasia is not of a specific nature, since a local syphilitic process should produce asymmetrical lesions; this, in fact, does occur, and he seems to have overlooked Cavallero's sections showing the early stages of destruction of the tooth germ. He expresses the opinion that "deformities of the teeth following heredo syphilis are of quite frequent occurrence and of great importance," but we think he very much over-estimates their frequency.

The forty-six plates, containing seventy-three illustrations, are all of great merit. Most are coloured, and the

[7] *Modern Wound Treatment and the Conduct of an Operation.* By Sir George T. Beatson, K.C.B., B.A., M.D., Surgeon, Western Infirmary, Glasgow; Senior Surgeon, Glasgow Royal Cancer Hospital. Edinburgh: E. and S. Livingstone. 1913. (Cr. 8vo, pp 106; figs. 10. 2s. net.)

[8] *A Textbook of Physiology.* By Professor Howell. Fourth edition. Philadelphia and London: W. B. Saunders and Co. 1911. (Med. 8vo, pp. 1018; 306 figs. 18s. net.)

[9] *The Student's Human Physiology.* By Ernest Evans. London: George Allen and Co. 1912. (Cr. 8vo, pp. 319; figs. 113. 5s. net.)

[10] *Diseases of the Mouth: Syphilis, and Similar Diseases.* By Professor Dr. F. Zinsser, Dozent at the Academy for Practical Medicine, Cologne. Translated and edited by J. B. Stein, M.D., New York College of Dentistry. London: Rebman, Limited. 1913. (Imp. 8vo, pp. 286; illustrations 73. 30s. net.)

natural tints are well reproduced. Each illustration is accompanied by a short description giving the reasons for the diagnosis. A large number of the illustrations refer to syphilis, but every disease mentioned in the text as possibly resembling syphilis is also illustrated. It is doubtful whether Figs. 63 to 66 represent teeth of syphilitic origin. The price of the book (30s.) will put it beyond the reach of most students, but it should be kept in every reference library.

TASTE AND SMELL.

To the series entitled *Questions Biologiques Actuelles*, edited by Professor Dastre, a volume on taste and smell has been contributed by L. Larguier des Bancels.[11] The subjects are treated in a readable and scholarly form. An interesting experimental observation quoted from Pawlow is that the sight of black may cause saliva to flow into the mouth of a dog if an acid solution coloured black has been put several times into its mouth; this sight reflex disappears if repeated frequently without being confirmed by the acid stimulus. The author quotes from Berthelot the curious calculation that if a gram of iodoform were enclosed in a tube communicating with a receiver of the capacity of 100 c.cm., it would scent every cubic centimetre of this perceptibly in one hour, but the amount lost by the iodoform is so small that if a fresh receiver were put in place every hour for a hundred years the iodoform would have lost only 1 mg. in weight; 0.01 mg. of mercaptan will scent 230 cm. of air, and 1 litre of air so scented will not contain more than 0.000,000,04 mg. of mercaptan. Odours spread as a gas diffuses, and the olfactory nerve endings are excited by the minutest quantity of matter. The fixation of odours by different substances is curious—for example, paint by wet hay, and tobacco by curtain materials; skatol is fixed by aluminium, musk by copper, tin, nickel, and lead, but not by aluminium or glass, and onions by steel. One of the most interesting ways of obtaining scents is *l'enfleurage à froid*; that is, simply putting the flower in contact with a layer of fat. The pommade so obtained when treated with alcohol yields up the scent.

PATHOLOGICAL INEBRIETY.

Shorter than Dr. Hare's recent volume, Mr. J. W. Astley Cooper's work on *Pathological Inebriety*[12] gives a lucid, workmanlike account of the pathology and treatment of inebriety. As Sir David Ferrier says in his introductory words of commendation, the book is characterized by sound sense, and bears the marks of ample experience. It is the work of an observer and thinker who writes well, but never permits temperance zeal to kill the scientific presentment of his subject. Mr. Cooper holds that all inebriates who come within the scope of the title of his book are psychoneurotics, and that, to be effective, treatment must be based on a recognition of this deficiency in their equipment. He employs a combination of isolation, drugs, and psychotherapeutics in the form of suggestion or other variety of hypnotism. The first stage is to withdraw the alcohol and suppress the desire for it; the second is the restoration of psychoneural integrity to enable the patient to realize his condition and the need for total abstinence. Mr. Cooper believes that the inebriate has the best chance of recovery in a well-managed retreat, and indulges in a friendly criticism of Dr. Hare's attitude towards these institutions. The pathology and treatment of the periodic and chronic inebriate are adequately dealt with, and the modern view that sudden stoppage of alcohol incurs the risk of delirium tremens is upheld. When once it has started, however, alcohol is said to do harm. Mr. Cooper pleads for preventive treatment in the shape of self-discipline of the young and the control of the inebriate, who both by precept and example is a potential manufacturer of inebriates. Chapters on inebriety and temperance societies, drug treatment and secret remedies, conclude the book, which is a valuable addition to the accumulating store of reliable facts on the subject of inebriety, and can be heartily recommended.

[11] *Le goût et l'odorat.* By L. Larguier des Bancels. *Questions Biologiques Actuelles.* Collection de monographies publiée sous la direction de M. A. Dastre. Paris: A. Hermann. 1912. (Roy. 8vo, pp. 100. Fr.3.50.)

[12] *Pathological Inebriety, its Causes and Treatment.* By J. W. Astley Cooper, Medical Superintendent and Licensee of Ghyllwood Sanatorium, near Cockermouth; with introduction by Sir David Ferrier, M.D., F.R.S. London: Baillière, Tindall, and Cox. 1913. (Crown 8vo, pp. 165. 3s. 6d. net.)

MEDICAL JURISPRUDENCE.

It is easy to see why Giffen and Dundas's *Student's Manual of Medical Jurisprudence and Public Health*[13] has reached a third edition in a comparatively short time. It is extremely handy in size, beautifully and clearly printed, and contains all essentials for a student arranged in such a way that reference is extremely easy, for the eye is easily caught by tables, headings, and subheadings in different type. All these points must naturally increase the popularity of such a book in the eyes of students, and we are of opinion that they really do constitute intrinsic excellence in themselves, for after all the most that any student of the subject can learn is its principles, real knowledge can only come by experience in courts and elsewhere. It is somewhat of a triumph of good packing to get the principles of forensic medicine and toxicology into 232 pages, and those of public health into 98. The worst feature of the book—it is not peculiar to this particular work, but applies to all small manuals for students—is that as the authors have to accept and teach one particular view of very disputable points, the student learns this view and very probably no other, and it remains with him through life, possibly to lead to trouble in cross-examination in court, where dogmatizing is out of place. Our meaning may be illustrated by referring to page 256, where it is asserted that the destruction of lecithin in fresh milk is *the* (the italics are ours) cause of the deterioration of milk from boiling or sterilization.

NOTES ON BOOKS.

The number of textbooks on elementary biology is constantly increasing, and one is tempted to wonder for what purpose they are all written as so many of them cover the same ground, and with regard to most of the subjects treated there can be little new to add. An exception may, however, be made in the case of *Applied Biology*,[14] by Professor Maurice A. and Anna M. Bigelow, for while it is true that the organisms, both animal and vegetable, dealt with in most textbooks are also included in this, it has the advantage of being a combined textbook and laboratory guide, and special attention is paid to the physiological and economic aspects of the science. There is also a part devoted to evolution and heredity in animals and plants. A student of general biology working conscientiously through this book will have gained a very considerable insight into the processes of Nature and a solid groundwork upon which to base further studies. Towards the latter he is also helped, advice being given as to the more advanced works which may be consulted by those wishing to probe further into the subjects dealt with in the various chapters. While the book covers more ground than is required by the average medical student, except, perhaps, in the case of candidates for certain university degrees, nevertheless the applications to man are so constantly referred to that the book may be recommended to all who wish to understand biology, and not merely to "cram up" the minimum amount for examination purposes.

It is only after reading a book like *The Cruelty Man*[15] that one realizes fully the benefits of the age in which we live, and which, in spite of its drawbacks, has yet grasped the fact that it has duties and responsibilities to discharge towards the weak and suffering. "The Cruelty Man" is the name by which the inspectors employed by the National Society for the Prevention of Cruelty to Children are known in certain districts to the people amongst whom they work, and the book contains an account of the actual experiences of one of these officers. No stronger proof could be given of the need for such a society than

[13] *Student's Manual of Medical Jurisprudence and Public Health.* By G. Heaton Giffen, F.R.C.S.I., D.P.H.Camb., and James Dundas, M.D., D.P.H., D.T.M. Third edition. Edinburgh: William Bryce. 1913. (Cr. 8vo., pp. 348. 5s. net.)

[14] *Applied Biology.* By Maurice A. Bigelow, Ph.D., and Anna M. Bigelow, M.S. New York: Macmillan Company. 1911. (Pp. 583.)

[15] *The Cruelty Man.* Actual experiences of an inspector of the N.S.P.C.C. graphically told by himself. London: National Society for the Prevention of Cruelty to Children. 1912. (Cr. 8vo, pp. 160. 1s. net.)

this matter-of-fact record of the tortures endured day by day by helpless children at the hands of those who ought to be their natural protectors. The author has been an inspector for many years and has seen many sad and dreadful sights, but he has managed to preserve his belief in the inherent goodness of human nature, and the gloom of his terrible story is lightened by his honest pride in his work and his tender pity for the miserable little beings he has helped to rescue from their wretched homes. His book is a mirror which faithfully reflects the hideous conditions in which thousands of suffering children are to-day leading their neglected lives, and its appeal on behalf of these innocent victims of parental vice and ignorance should go straight to the heart of every right-thinking man and woman.

In late years it has become a custom with some of the principal wholesale and manufacturing pharmaceutical houses to publish to the world much of the information which they obtain in the regular course of testing crude drugs, chemicals, and preparations made from them. Such a practice is entirely to be commended. The latest publication of this kind which has reached us is *Evans's Analytical Notes for 1912*, published by Messrs. Evans, Sons, Lescher, and Webb, Ltd., of Liverpool and London. It contains accumulated data of great value to all those engaged in the analysis of drugs, and not without interest to the medical practitioner, as showing the amount of trouble and of scientific work which has to be expended in maintaining the quality and purity of medicines for which the leading houses can now be depended on. In the introductory note it is mentioned that over 10,000 samples have been examined in this firm's laboratory during the year. Of the 2,400 samples dealt with in the *Notes*, 250 were found to be in some way below the standard; this fact well exemplifies the necessity for such testing, especially when it is borne in mind that the drugs tendered to a firm known to test samples thoroughly are likely to be distinctly above the average of all those in the market. The details of the notes are necessarily very technical and outside the scope of these columns. The fact is alluded to that "the researches of science are being employed in an illegitimate, as well as in a legitimate, direction"; it is evident, however, that in the perpetual competition between sophisticator and analyst the latter manages to maintain a good lead. The firm offers to send a copy of the *Notes* to any person interested.

English men and women are notoriously bad linguists; and even amongst the educated classes there are many who have considerable difficulty in making themselves understood when travelling in a foreign country. To such people the *Travellers' Practical Manuals of Conversation*,[16] published by Marlborough and Co., should prove invaluable travelling companions. The second volume of this excellent series is designed to meet the needs of English tourists in France, Belgium, Switzerland, Austria, Germany, and Holland, and contains, besides the usual phrases and a full vocabulary of French, Dutch, and German words, much information that should be of assistance to the inexperienced traveller. The book, which has been very carefully compiled, is well printed, and has the additional advantage of being of a convenient size and shape for carrying in the pocket or handbag.

A third edition has appeared of Dr. PROUT'S *Lessons on Elementary Hygiene and Sanitation*,[17] a composition which has already received very favourable notice in these columns. Its scope extends somewhat further than is indicated by the title, for elementary anatomy and physiology both receive considerable attention. Though written mainly from the point of view of the needs of dwellers in tropical climates, it would be a useful book to place in the hands of lay students anywhere.

The volume entitled *Collected Papers by Officers in the Royal Army Medical Corps*[18] consists of reprints of various communications appearing in the *Journal of the Royal Army Medical Corps* during the twenty months ending December, 1913. Numbering just two dozen, they relate largely to research work in connexion with venereal disease, malarial fever, and other tropical diseases. The volume bears notable testimony to the scientific activity of the modern soldier-doctor.

[16] *Marlborough's Travellers' Practical Manual of Conversation*. No. 2, in English, French, German, and Dutch. London: E. Marlborough and Co. 1912. (Pott 8vo, pp. 144. 1s. 6d.)

[17] *Lessons on Elementary Hygiene and Sanitation, with Special Reference to the Tropics*. By W. T. Prout, C.M.G., M.B., C.M.Edin., Medical Adviser to the Colonial Office. Third edition. London: J. and A. Churchill. 1913. (Demy 8vo, pp. 204; 60 figs. 2s. 6d. net.)

[18] *Collected Papers by Officers of the Royal Army Medical Corps*. Vol. 1. London: John Bale, Sons and Danielsson. 1913. (Sup. roy. 8vo).

MEDICAL AND SURGICAL APPLIANCES.

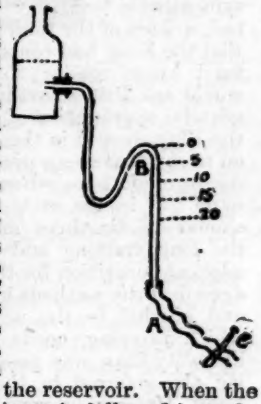
An Instrument Tank.

MR. W. SAMPSON HANDLEY (London) writes: The sterilization of instruments in private houses by a spirit lamp and boiling water immediately prior to an operation is an annoying and time-consuming process. Owing to the vagaries of spirit lamps, it is not unattended by risk of accident. The instrument tank represented in the figure

is of a size to hold all the instruments required for an ordinary abdominal operation. The instruments required are boiled at home in an ordinary sterilizer, dried (or dipped in methylated spirit), and placed in the tank immediately ready for use, immersed in methylated spirit, to which, if desired, a proportion of lysol can be added. Sharp instruments—such as knives, scissors, and needles—are kept in the tank permanently, and need not be boiled. Ligatures may also be kept in the tank. Once in two or three weeks the instruments should be taken out and cleaned, especially if lysol is used, since it causes a greasy deposit to form upon them. It is also important to see that no blood or water gets access to the tank, since in either case the instruments will rust. It should be noted that the tank is not intended for sterilizing instruments by heating. It is simply used as a container. It was made to my design by Messrs. Meyer and Meltzer, and has been tested by two years' constant use in practice. The top, sides, and bottom of the box are made of sheet copper. The whole strength of the box is concentrated in the circumference of the lid, which is a gun-metal casting, and the top edge of the box itself, which is also cast in gun metal, and has upon its upper aspect all round a deep undercut groove into which a ring of hard rubber is forced by pressure. This groove corresponds with a V-shaped ridge within the lid, which bites into the rubber and ensures a spirit-tight joint. The spirit should be changed whenever it becomes turbid.

Technique of Hypodermic Injection.

DR. H. POLLARD HACKER (London), writes: I recently devised an apparatus which enables nurses and others to test themselves in the technique of hypodermic injection. It shows at a glance whether the full dose has been delivered, and also whether any air has been admitted at the same time. It consists of a reservoir of coloured water connected to an arrangement of tubing as shown in the diagram. The dose prescribed is measured in ether and is injected through the rubber tubing at A. The ether will be seen to rise through the coloured fluid and can be measured off at B, and the actual amount delivered compared with the dose intended. Any bubble of air also admitted will be evident above the fluid injected. The clip C is then released for a moment, and the injection flushed out by fresh fluid from the reservoir. When the clip is reapplied the apparatus is again full, and is ready for the next trial. The apparatus can also be used to demonstrate the method of using Southey's tubes and the aspirating syringe.



THE first Italian congress of medical radiology, organized by the Italian society of medical radiologists, founded in January, will be held at Milan in October. The subjects proposed for discussion are intensive apparatus in *x*-ray technique, introduced by Professor Maragliano of Genoa; radiological investigation of the skull, introduced by Dr. Aristide Busi of Bologna; radiology of the bowel, introduced by Dr. Pasquale Tanjoda of Naples; Roentgen-ray and radium treatment in gynaecology, introduced by Professor Lario Bertolotti. Communications should be in the hands of the General Secretary, Dr. Felive Perussia. Foro Bonaparte 61, Milan, on or before August 31st.

FESTIVAL DINNER OF THE ROYAL MEDICAL BENEVOLENT FUND.

In the absence of Prince Arthur of Connaught, owing to the illness of the Duchess of Connaught, Sir JOHN TWEEDY, the President, occupied the chair at the festival dinner of the Royal Medical Benevolent Fund at the Hotel Cecil on April 30th. A numerous company sat down, and the guests included many ladies.

Sir JOHN TWEEDY, in proposing the toast of "The Fund," read a message from Prince Arthur of Connaught, who, after announcing that, in addition to conferring the title of "Royal," His Majesty had bestowed a still greater honour upon the fund by consenting to become its Patron, described the work of the fund, and continued:

> I am not sure that we all realize what a debt we owe to the medical profession. The fact that its members are spending their lives in alleviating suffering and fighting disease must appeal to the imagination. Do any of us, whose business hours are from 10 to 4, ever think of the over-worked doctor, liable to be called out at any hour of the day or night to pass several hours at a bedside, while others, who have probably not spent nearly such a hard day in pursuit of their profession or business, are obtaining what they consider their well-deserved rest?
>
> Great prizes in the way of fame and fortune are, no doubt, attained by a few members of the medical profession, but these must always be in a minority. When we consider the long and patient training needed for such a profession as medicine and surgery has become in these days of exact science, it is inevitable that amongst the rank and file some must go to the wall. Even those whose talent and industry give promise of a brilliant career may be struck down by illness, and it is to provide for the fatherless children of such that I plead this cause to-night.
>
> As you are all aware, the Royal Family and myself have very special reasons for gratitude to the medical profession, by whose skill and care my beloved mother, the Duchess of Connaught, though passing through a very grave crisis, is being slowly restored to her normal health and strength. Consequently it is a great pleasure to me to subscribe to this fund and to hand over a cheque from my father as his contribution as a thank-offering and tribute of respect and admiration for the noble profession so largely represented at your gathering to-night.

Dr. SAMUEL WEST, the Treasurer, in responding, remarked that no one could fail to be touched by the sympathetic tone in which Prince Arthur of Connaught had written of the fund and its work. The announcement that the King had consented to become the Patron of the fund would render that gathering memorable. They would ask Prince Arthur to convey to His Majesty their grateful appreciation of the honour, and of the sympathy the King showed in the work of the fund. Dr. West went on to say that every profession had its woes, but upon the doctor misfortune, when it came, laid a particularly heavy hand. If in the early years his health broke down, or should he die, there might be, owing to the expenses of the long training and the acquisition of a practice, no adequate provision for the widow and children. Dr. West described the methods by which the fund is administered, and alluded to the need for an emergency fund out of which pressing needs could be relieved with greater liberality than was possible out of the ordinary income. He also referred to the valuable work of the Guild of Lady Helpers in rendering the personal service which was no less important than the pecuniary assistance afforded by the organization.

Sir JOHN TWEEDY proposed a resolution of thanks to Prince Arthur of Connaught for his sympathetic interest in the fund, and for the earnest and eloquent appeal he had sent on its behalf. Sir John Tweedy remarked that never was medicine higher in the hierarchy of the sciences than at the present time, but, on the other hand, never were the prospects and status of the general practitioner more uncertain. The difficulties of medical practice were such that it was difficult for the majority of medical men to do more than earn a modest livelihood and secure sufficient means for the decent maintenance and upbringing of a family. He wished he could see any solid hope for improvement in the future, but he feared that straitened circumstances and even actual poverty must be the portion of a large number of medical practitioners in this country.

Mr. PARKER YOUNG, Chairman of Committee, seconded the vote of thanks, which was carried with acclamation. Lord GOSCHEN proposed the health of the Chairman, who made suitable acknowledgement.

During the evening it was announced that subscriptions to the fund had been collected or promised to the amount of nearly £3,000.

SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE, 1913.

SECTION OF OBSTETRICS AND GYNAECOLOGY.

THE President of the Section is Sir Francis Champneys, Bart., and the Honorary Secretary is Dr. Herbert R. Spencer (104, Harley Street, W.). The section will meet in the Chemistry Theatre of the Imperial College of Science. The following discussions have been arranged:

Thursday, August 7th.—A discussion will be opened by Professor Döderlein (Munich) and Professor Essen-Möller (Lund) on the treatment of haemorrhage from the placental site (placenta praevia and accidental haemorrhage) in the later months of pregnancy.

Friday, August 8th.—A discussion (jointly with the Sections of Diseases of Children and Hygiene and Preventive Medicine) on infant mortality in the first four weeks of life will be opened by Dr. A. K. Chalmers (Glasgow), Dr. Henry Koplik (New York), and Professor Wallich (Paris).

Monday, August 11th.—A discussion (jointly with the Section of Radiology) on Roentgen and radium therapy in gynaecology will be introduced by Dr. Fovean de Courmelles (Paris), Professor B. Krönig (Freiburg), and Professor A. Schönberg (Hamburg).

Tuesday, August 12th.—A discussion on cancer of the uterus (body and cervix)—operative technique and results, will be introduced by Professor D. de Ott (St. Petersburg), Professor A. Pollosson (Lyons), and Professor Wertheim (Vienna).

The afternoon sessions will be occupied with the reading and discussion of independent papers, which will be selected by the Council of the Section, and for demonstrations. The latest date for the reception of titles of papers is July 1st.

The department of the museum dealing with obstetrics and gynaecology will contain specimens illustrating the papers and discussions, and also other material either dealing with the subjects of cancer of the uterus and haemorrhage from the placental site or illustrating other investigations and observations of current interest.

An exhibition of old obstetrical instruments will be a special feature of this department of the museum. It will contain the whole of the collection now preserved at the Royal College of Surgeons, which is being catalogued by Mr. Alban Doran, and, it is hoped, many other rare old instruments from British and foreign sources. Communications regarding the museum should be addressed to the Honorary Secretary of the Museum Committee, Mr. H. W. Armit, Ravenhurst, Talbot Road, Wembley.

On Saturday, August 9th, a dinner will be given by British members of the Section, at which foreign guests will be entertained.

SINCE antityphoid vaccination was introduced in the French Army, in January of last year, 62,788 men have voluntarily submitted to the treatment. No injurious effects have been observed, and the measure of protection afforded by the vaccination has been very marked. The official statistics show that in France no case of typhoid fever has occurred among the soldiers vaccinated, who, on December 31st, numbered 37,140. On the same date only one case was reported among the 13,290 vaccinated men in Algiers-Tunis; that was in a soldier who had come from Morocco. In Morocco the results were as follows: In Eastern Morocco the morbidity and mortality were *nil*, whereas among the non-vaccinated the morbidity was 38.23 and the mortality 5.51 per 1,000. In Western Morocco the morbidity among the vaccinated was 2.96 and the mortality 0.09 per 1,000, whereas among the non-vaccinated the morbidity was 168.75 and the mortality 21.29 per thousand. Taking the average typhoid statistics for the whole army it is estimated that antityphoid vaccination has, among the 62,788 men treated, prevented 2,101 cases of disease and 266 deaths during the year 1912.

NINTH INTERNATIONAL PHYSIOLOGICAL CONGRESS.

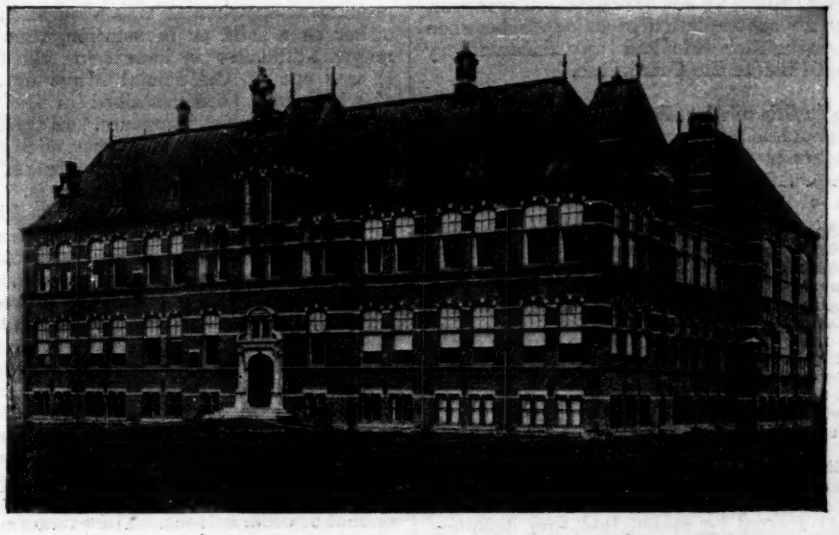
GRONINGEN, SEPTEMBER 2ND TO 6TH, 1913.

THE Ninth International Physiological Congress will be held at Groningen from September 2nd to 6th next, under the presidency of Dr. H. J. Hamburger, Professor of Physiology in the University of Groningen, and Director of its Physiological Institute. Previous congresses have been held in Bâle (1889), Liége (1892), Bern (1895), Cambridge (1898), Turin (1901), Brussels (1904), Heidelberg (1907), and Vienna (1910).

Groningen was one of the first universities in Europe to be provided with a building specially designed to fulfil the purpose of a physiological institute. About the year 1863, the late Professor Donders induced the then Minister of the Interior for Holland to provide in the national budget a grant of money for the erection of physiological laboratories at Utrecht, Leyden, and Groningen. The first of these to be completed in Holland and the second in Europe was that at Groningen. It was fitted up under the direction of Van Deen in 1866.

The present building, which has replaced that erected in 1866, was completed and fitted under the direction of Professor Hamburger, and was opened on April 7th, 1911.

The main building forms three sides of a square, and the illustration shows the main front. The building consists of a basement and two stories. On the first floor is a large lecture room fitted with a kinematograph, for which device Professor Hamburger foretells a great future in physiology, not only as a means of demonstrating movements to students, but also for research, and particularly for the analysis of movements by running the machinery slowly. Adjoining the theatre are the preparation room and the private office and laboratory of the Director. On the same floor is a laboratory and reading room, a balance room, a "spectatorium" for demonstrations, a laboratory for candidates preparing their theses for the Doctor's degree, and a laboratory for assistants, a histological class-room with attached preparation room, and a drawing and photograph room.



On the ground floor are the rooms for practical instruction in physiology, a bacteriological laboratory, where in particular investigations are carried out with regard to enzymes and antibodies, for Professor Hamburger entertains the opinion that the essentials of serum therapeutics and immunity, since they are based on physiological reactions, concern the physiologist as much as the pathologist and hygienist. There is a large operating room for animals, with attached preparation room, observation room, and sterilization room. On this floor also are rooms for physico-chemical researches, and for optical and x-ray investigations.

In the basement there is a room for electro-physiology, a laboratory for low temperatures, another for investigation of the body temperature, a centrifugalizing room, a room for meters of gas, water, and electricity, and various offices.

The laboratory is surrounded by grounds, which are cultivated for green food and clover, and are used also as a meadow, which contains a natural pond, where fish can live through the winter. In the grounds there is also a stable.

The facilities afforded by the institute are placed at the disposal of competent investigators free of charge. Great pains have been taken in the arrangement of the details of the rooms, so that, with the help of an inventory, anything can be found at short notice. If an object is taken away, a printed card is put in the vacant place recording the name of the person who has borrowed it and the room to which it has been taken. In fact, Professor Hamburger has worked out with scientific precision the old injunction to find a place for everything and everything in its place.

The scientific staff of the institute consists of the Professor-Director and four assistants, whose duties are confined to giving assistance in the conduct of the practical classes. The rest of their time is at their own disposal for scientific work. One of the assistants, who has the title of Conservator, assists the Director in the management of the laboratory, and acts when necessary as his substitute. Every week the Conservator makes a report to the Director on what has been going on in the laboratory during the past week. In addition to the scientific staff there is a technical staff whose offices are permanent; the professor is assisted in his lecture experiments by the senior member, called the first amanuensis. The second amanuensis is responsible for the inventory, and both assist, not only the Director, but other members of the scientific staff in their experiments.

The chief instrument maker has a workroom and an apprentice, and there is a mechanic who attends to the larger engines for general use.

The Congress, as has been said, will begin on September 2nd, and the President in a recent circular emphasizes his approval of one of the rules of the Congress, which is: "Special value is attached to the demonstration of actual experiments, which will always take precedence of merely oral communications." He invites physiologists to give demonstrations and experiments, even though they may already have been published. The business of the Congress will occupy from about 9 a.m. to 5 p.m. on Tuesday, Wednesday and Thursday. On Friday afternoon, September 5th, a closing meeting will be held in the aula of the University, when Professor J. P. Pawlow will give an address on the investigation of the higher nervous activities.

During the Congress there will be an exhibition of physiological instruments and apparatus. These will be exempt from all duty, and the cases containing them will only be opened in the laboratory at Groningen. A committee of ladies has been formed to arrange entertainments and excursions.

A tour has been arranged, starting on Saturday, September 6th, through some of the most interesting parts of Holland, including the northern part of the country, which, though known to few foreigners, is most characteristic and interesting.

THE Paris Academy of Sciences has awarded prizes of the value of £100 each to Dr. Carlos Finlay and Dr. Aristides Agramonte of Havana in recognition of their investigations on yellow fever.

A DEPARTMENT for treatment with radium emanation has been established at the New York Post-Graduate Medical School and Hospital. The department is intended for scientific investigation as well as for the treatment of disease.

THE PARLIAMENTARY COMMITTEE ON PROPRIETARY MEDICINES.

The Advertisement of Medicated Wines in the Medical Press.

On May 1st the Chairman (Sir Henry Norman) announced that he had a further statement to make on the subject of the advertisement of Coleman's Wincarnis in the British Medical Journal. The Committee had received a letter from Mr. Rudderham, the general manager of Messrs. Coleman and Co., enclosing a copy of correspondence between Dr. Cox and himself on this matter. It did not appear necessary for the whole of the correspondence to be read; summarized, it was to the effect that Mr. Rudderham entirely repudiated the statement made by Dr. Cox that the advertisement of Wincarnis was refused by the British Medical Journal, and he declared that statement to be supported by the advertising agents of the firm. Mr. Rudderham suggested that possibly the British Medical Association might have considered the question of the advertisement of medicated wines after the advertisement by his firm had ceased, and he invited Dr. Cox to give him any documentary proof. On the other hand, Dr. Cox adhered strongly to his statement that on September 22nd, 1910, the Financial Secretary and Business Manager to the Journal received an order for thirteen more insertions of the Wincarnis advertisements, and that this was not executed. There was, therefore, a complete contradiction of evidence between the parties and on neither side had any documentary evidence been placed before the Committee.

[With reference to this matter, the Medical Secretary of the British Medical Association on May 5th addressed a letter to the Secretary of the Committee, in which, after recapitulating the Chairman's observation, he wrote as follows:

I have now the honour to send you the actual order, dated September 22nd, 1910, for further insertions of the Wincarnis advertisement in the British Medical Journal, on which document I based my case for challenging the accuracy of the statement made by Mr. Rudderham. I would ask you in due course to return this order.

I beg to state, in order that there may be no further doubt about the matter that the advertisement tendered was not inserted, that no correspondence took place on the matter, and that the advertising agents, on inquiring through the telephone why they had not received any communication respecting the advertisement, were informed by our Manager that we did not intend to insert it.

I note that according to the statement made by the Chairman of the Committee Mr. Rudderham has nothing to say in regard to the *Lancet*, and I would repeat that I have the authority of the Manager of that journal for saying that they definitely declined the advertisement of Wincarnis for reasons which I have previously stated, and that the Manager of the *Lancet* is willing to appear before the Committee if required.

It is obvious, therefore, that if the above statements are correct, and they are easily capable of being tested, Mr. Rudderham was not correct in stating that his advertisements were withdrawn from the medical press for commercial reasons.]

The Limitations of Analysis.

Evidence was then given by Dr. Dobbie, who said he was head of the department organized by the Treasury about two years ago for the purpose of advising various Government departments on analytical questions and to do chemical work on their behalf.

In response to the Chairman's request, the witness first dealt with the limitations of analysis. He remarked that there was an important distinction between the terms "detection" and "determination," which were constantly used in connexion with chemical analysis. Detection of a substance meant proving its presence without regard for its quantity. Determination meant ascertaining the quantity. It might be quite possible to detect or identify a substance by chemical means in certain cases where there were no satisfactory chemical means of determining or evaluating it. For example, the presence of one or more of the constituents of digitalis in a medicine might be determined chemically, but there was no satisfactory chemical method of determining the proportion of the active ingredients in digitalis. In some cases the physiological test was employed; the drug was administered to animals. Thus, while the statement made to the Committee that only forty-four of the vegetable preparations in the *British Pharmacopœia* had definite chemical principles which could be determined might or might not be correct, it would not be correct to say that only forty-four could be recognized by such methods. Detection of a substance depended ultimately on obtaining it or some of its combinations or derivatives in a condition recognizable by some characteristic property—for example, form, colour, smell, taste, melting point, boiling point, solubility, miscibility, or alteration in colour or other characteristic, when brought in contact with chemical reagents. There was no essential difference in principle between the method of detecting a substance by ordinary analysis and those of the expert who judged chiefly by smell and taste. From some of the evidence it might appear that the one method of identification was essentially different from the other.

In reply to the Chairman, the witness said he did not disagree with the view that an expert who had spent years in the handling of drugs would have acquired a certain applied use of the senses in a special degree in detecting drugs.

Continuing, he said that the quantity of essential oil obtained in the ordinary analysis of medicine was often so small that it would be impracticable to determine its physical and chemical constants, such as specific gravity, boiling point, polarization, and so on; the odour alone had often to be relied upon. On the question of the trustworthiness of analysis when applied to medicinal preparations, when it was a question of a single drug, either as a solid or in solution, there would usually be no great difficulty in identifying the drug, provided that it was one of the official drugs or one the properties of which had been described in the ordinary chemical or pharmacological literature. In the large class of drugs included in inorganic substances, such as salts of bismuth, mercury, zinc, bromides, iodides, alkalis, acids, and so on, no difficulty would arise in analysis. The same could be said of substances of definite composition, either prepared synthetically or extracted from plants, such as acetanilide, salicylic and other acids and alkaloids; also plants or parts of plants, whole or powdered. Taking the whole range of medicinal substances, in regard to the great majority there would be no special difficulty in identifying the drug in question with certainty when the analyst was dealing with single articles, the properties of which had been adequately studied and described. When, however, the drug was a new one, or one not known to British pharmacists, or one which had no known characteristic, chemical or physical property, its definite recognition might be difficult or impossible. To that group belonged extracts from certain plants, obtained by maceration of the plant with alcohol or other solvent. The extract might only contain substances common to several plants and nothing characteristic of any one, and then it would be impossible to identify it positively by chemical means. Speaking generally, it was quite practicable for chemical analysis to deal with most of the mixtures of drugs prescribed in ordinary medicines, but when a number of drugs were mixed together the difficulty increased with the complexity of the mixture, and eventually the difficulties became so great that the complete analysis of the mixture was impossible. Even in such cases bodies of a distinct character might be separated from the mixture and identified, the organic from the inorganic, the volatile from the non-volatile, and so on. In many cases the constituents of a mixture could be detected directly and readily because they had characteristic properties. Broadly it might be said that the proportions of mineral drugs could be determined with no substantial error; organic bodies, however, presented a much wider range of variation, and, while some of them could be determined accurately, approximations only were possible in other instances. So far as a general opinion could be given, it would be safe to say that where the presence of an active organic drug in a mixture had been definitely ascertained, in the majority of cases the analyst by one means or another could obtain a fair idea of its proportions, although sometimes he must be content with a rough approximation only.

The Chairman: Speaking generally, the analysts who have appeared on behalf of proprietary medicines have told us that in very many cases it is practically impossible to detect or determine the composition of a medicine. On the other hand, the analyst who has appeared on behalf of

those who are criticizing proprietary medicines has told us that practically to all useful intents and purposes you can detect what is in a medicine. On which side do you range yourself?

The Witness: So far as I have read the evidence I do not think there is very much conflict between the analysts. I would say that some of the witnesses on one side would push the dividing line further than I should in one direction; on the other side the witnesses would push it further in the other direction. (Laughter.)

The Chairman: I am sorry you cannot range yourself a little more definitely on one side or the other.

The Witness: I am on the side of the chemists.

The Chairman: I am not sure we know which side they are on. (Laughter.)

Sir Philip Magnus: The dividing line to which you referred is a "movable fixture"?—Yes.

The Chairman: May we put it that, as a general rule, any drug with fairly active therapeutic effects can be detected?

The Witness: Not every drug, but most drugs.

Do you mean there may be a drug with fairly active herapeutic effects which cannot be determined by analysis?—If it is contained in a mixture, yes.

Then in that case, supposing a proprietary medicine owner says in his advertisements that his is a very valuable medicine, and no analyst can possibly tell what it is, that might be a correct statement in certain circumstances?—I think so. The witness added that the number of drugs which could not be identified was constantly diminishing as knowledge advanced.

Mr. Cawley: Is it correct to say that drugs which have a therapeutic effect have generally some known reactions which enable them to be discovered without much difficulty?—I think as a general statement that is correct.

The Analysis of Woodward's Gripe Water.

After the luncheon interval, Sir Philip Magnus, who was then in the chair, said he wished to ask the witness a question regarding the analysis of Woodward's gripe water. The Committee sent a sample of this preparation to the Government analyst, and when that analysis was read to Mr. Umney he said: "It is not more accurate than Mr. Harrison's; the particular ingredient (the ingredient stated by Mr. Umney to be present) has not been found, but certain ingredients not in it have been found, and I think practically it is a general confirmation of the statement that these things cannot be determined by analytical methods." Since then (proceeded Sir Philip Magnus) the Government analyst had again analysed the medicine, and he asked if the witness had anything to say on this.

The Witness: As regards the statement that certain ingredients that are not in the gripe water have been found, we see no reason whatever for modifying the terms of our report; we are not prepared to dispute the allegation that another extract is an ingredient of the article—if so its presence was masked by the capsicum.

Disclosure of Formulae: An Analogy.

Dr. Dobbie went on to deal with the suggestion advanced by various witnesses that the formulae of proprietary medicines should be registered with the Customs and Excise Department, with particulars of any poisons they contained. He thought it might be useful to the Committee to have some information as to the regulations adopted for the protection of the public in a case somewhat analogous to the sale of proprietary medicines. The Board of Agriculture, he explained, to secure that sheep dips should be efficient for the purpose, while at the same time securing that the various makers' formulae should not be divulged to trade rivals, and that within certain limits freedom of competition and manufacture should prevail, made the stipulation that sheep must be dipped with a dip approved by the Board of Agriculture, and the dip must contain 1 per cent. or more of a disinfectant. Makers might include any other ingredients they wished, and the formulae in fact varied considerably, but, in order to get a dip approved, the formula must be submitted to the Government chemist, an analysis being made to see that the manufactured product conformed to the formula. More than 1,300 samples had been examined in connexion with the various formulae submitted, but no complaint had been made that the makers' secrets leaked out, and the regulations had not destroyed competition in the production of dips. There was a somewhat similar procedure with regard to the strength of disinfectants used on board ship. He thought this procedure gave some hints as to a possible method of dealing with proprietary medicines; it showed it to be possible to have a disclosure that would protect the public and not injure the interest of the proprietor.

Mr. Bathurst suggested that it would be difficult to apply this procedure, because in the case of proprietary medicines more than one ingredient needed supervision. The witness thought that the method might be that before a proprietary medicine vendor could get a medicine stamp or licence he would have to disclose his formula to a public department and submit a sample for examination; if the medicine was found to contain the admitted remedy for the complaint which it purported to treat, then his view was that it would be accepted.

Mr. Bathurst: But who is going to decide whether the alleged remedy is a remedy?

Mr. Lawson: The British Medical Association, perhaps?

The witness replied that a public body would have to be given that function.

Mr. Glyn-Jones: If a man buys a dip, he has the Government guarantee that it is efficacious. Would the Government analyst like to be put in that position as regards the proprietary medicines?

The Witness: It would be a Government statement that the preparation did contain an admitted remedy for the complaint it claimed to cure.

You agree that it is much easier to act as a censor for a sheep dip than for a medicine?—Yes.

Mr. Lawson remarked that, although sheep dips were sold under a certificate by the Board of Agriculture, that sort of approval could not be applied to proprietary medicines. The witness thought that was for the Committee to say. In reply to a further question, he said that difficulties of analysis would be to a great extent overcome in this way; if the vendor were required to submit the formula, it would always be possible to check the composition, because the article could be made up in accordance with the list of ingredients, and it could be ascertained whether the article resulting agreed with the formula.

Mr. C. Simmonds, a first class analyst in the department of the Government chemist, then gave evidence. He put in, without reading, an elaborate statement as to the character of the drugs in the *Pharmacopoeia* which might be determined by analysis. Mr. Glyn-Jones suggested that the fact that there were so many drugs outside the *Pharmacopoeia* vitiated the figures given in the witness's statement of the drugs which could and could not be determined by analysis. The witness, however, thought that his list might be taken as fairly representative. Mr. Glyn-Jones further suggested that there were drugs for whose therapeutic action scientists could not account, and that therefore analysis would not have any bearing on their medicinal merit. The witness replied that this question was a medical one and was beyond his competence.

The Committee adjourned for a month for the Whitsuntide recess.

An international conference for the biological and statistical study of alcoholism was recently held at Paris at which France, Great Britain, the United States, Austria, Italy, Russia, Switzerland, and Belgium were represented. The following list of questions was drawn up as an international programme of studies: (1) Does alcohol possess any alimentary property or not? (2) What is the relative influence of the forms and manner in which alcohol is consumed? (3) What is the alimentary value of the different alcoholic beverages? (4) What are the effects of pure alcohol and the extraneous substances produced by the distillation of fermented products? (5) What are the principal causes and effects of alcoholism? (6) What are the means employed against alcoholism, and with what results? (7) A critical investigation of the national statistics of the production and consumption of alcohol and alcoholic beverages; consideration of the effect of such production and consumption.

UNIVERSITY OF LONDON.

FINAL REPORT OF THE ROYAL COMMISSION.

[Third Notice.]*

The Royal Colleges in London.

So far as we have been able to ascertain from a study of the report, the scheme propounded by the Commissioners contains no place for the Royal Colleges of Physicians and Surgeons in London. They would not be constituent parts of the University, and they would not be entitled to representation on the proposed Board of Medical Studies nor on the Medical Faculty should it be formed. Both of these bodies would consist wholly or mainly of direct representatives of schools actually engaged in teaching.

The Commissioners devote a section of their report to the consideration of proposals made to them by the Presidents of the Royal Colleges of Physicians and Surgeons in London and Mr. Hallett, the Secretary of the English Conjoint Board, for the purpose of establishing a single portal to the profession in England. The witnesses, it is stated, spoke in their private capacity, and not as representing the Royal Colleges.

The proposal was that all English students should enter the medical profession through the single portal of the final examination in medicine, surgery, and midwifery of the English Conjoint Board. A student who had passed the earlier examinations of a university and completed a five years' course would be admitted to the final examination, and, having passed it, would be entitled, upon payment of the fees required by the Royal Colleges, to the diplomas of L.R.C.P. and M.R.C.S. His university would require further study, and probably additional subjects, and might require additional examinations to entitle him to the medical degree of the university. A student who was not a member of a university but had passed a preliminary examination recognized by the Conjoint Board and a preliminary and intermediate science examination of that Board could obtain the diplomas of the Royal Colleges upon passing his final examination, but could not proceed to a university degree. It was proposed that the universities should either have three representatives on the Committee of Management of the Conjoint Examination, or should have assessors to be present during the examination of their own students, or should agree to accept, in lieu of their own examination in the final professional subjects, the examination of the Conjoint Board. The Board, on the other hand, as has been stated, would continue to admit to its final examination not only students who had taken the earlier part of their course in the University but also students who had passed the preliminary examination accepted by the Conjoint Board "which is of a lower standard than a matriculation at the universities," and had also taken the examinations held or accepted by the Conjoint Board in the preliminary and intermediate sciences. The Commissioners express the opinion that in view of the provision of Section 3 of the Medical Act, 1886, such a scheme would probably require the sanction of Parliament. The section of the Medical Act referred to defines a qualifying examination as follows:

> A qualifying examination shall be an examination in medicine, surgery, and midwifery, held for the purpose of granting a diploma or diplomas conferring the right of registration under the Medical Acts by . . . (c) Any combination of any such university as aforesaid with any other such university or universities, or of any such university or universities with a medical corporation or corporations, the bodies forming such combinations being in the same part of the United Kingdom.

In view of subsection (c) the opinion that further authority from Parliament would be required is a little surprising.

The Commissioners state that the main argument in favour of the proposal was that the large number of medical students who reach the final examination for the degree of M.B. of the Universities of England have already passed the final examination of the Conjoint Board, and that it is a hardship that they should be compelled to pass two examinations in the same subject. The statistics given to the Commission were to the effect that about 67 per cent. of the university students who reached the final examination of the university also took the final examination of the Conjoint Board. The percentage in the case of students of Oxford, Cambridge, and London universities was 82, while in the case of the northern universities it was not more than 40.

The Commissioners considered the question of the advisability of a single portal as the entrance to the medical profession to be beyond their reference, because they could not be in a position to form a considered opinion without ascertaining the views of all the universities and other licensing authorities whose consent and agreement would be required, and that to ascertain these views would have carried them beyond the scope of their inquiry.

On the other hand, they consider that it is within their reference to consider whether it may be desirable and feasible for the University of London to make an arrangement with the Royal Colleges with regard to the final examination. The Commissioners observe that if the University of London were to join in an arrangement between all the English universities and the Royal Colleges for the conduct of the final examination it might be possible for the Royal Colleges to require all candidates for their diplomas to take the courses and examinations of the University in the earlier part of their curriculum.

The Commissioners, however, hold that it is more important to raise the standard of entrance to the medical curriculum and to afford a more scientific foundation for the professional studies than to ensure a uniform standard of professional attainment for entrance to the profession, and believe that "the permanently open door of the Conjoint Board to a lower level of general education than the universities require, and an examination in the more purely scientific part of the medical curriculum which tends to hamper the teaching by the requirements of a prescribed syllabus is a greater disservice to medical education than any slight variation of standard in professional attainment which the final examinations of the universities may allow."

In their examination of the reasons given for the establishment of a single portal the Commissioners say: (1) That the contention that the number of licensing authorities has been largely increased by the creation of new universities would have more weight if there were any real danger of the standard being lowered, but they do not think it is suggested that the General Medical Council fails to perform its inspecting duties efficiently, and still less that the qualification granted by any university is at the minimum standard. (2) To the argument that the Government and municipal medical services are increasing the demand for official as compared with private medical practitioners, the Commissioners reply that what is specially required for a public medical service is the scientific training of a university education, rather than strict uniformity of professional attainment. (3) Another argument quoted is that the endowment of the medical departments of the universities and of independent medical schools by the State through the Board of Education entails a system of Government inspection, and that from inspection to control, dependent upon results of examinations, with a view to uniformity, is a short step. The Commissioners express their inability to understand this argument, and point out that the grants of the Board of Education to medical schools are university grants, and it is contrary to the declared policy of the Board to interfere with the educational freedom of the universities. If it were not so, the Commissioners state that they would be strongly opposed to such a method of subsidizing university education.

They declare themselves unconvinced by the contentions stated, and express the opinion that to make separate arrangements with the University of London would not improve the earlier Conjoint Board examination. On this point they say:

> It would not be possible under a separate arrangement between the University of London and the Royal Colleges to insist on the Royal Colleges reciprocating by requiring a university standard of general education, and university courses and examinations for the earlier parts of the curriculum, because if such an arrangement were made with regard to London students, and did not apply to other candidates for the diplomas, all the purely Conjoint men would be driven out of the London medical schools—

* Previous notices were published on April 19th (p. 836) and April 26th (p. 895).

a result which the Royal Colleges would not face, and the University of London would not desire. Moreover, such an agreement might not be possible, as we were told that the northern universities had announced their intention of opposing any exclusive agreement between London University and the Royal Colleges.

In dismissing this subject the Commissioners state that, after careful consideration, they are not prepared to recommend the University of London to give up examining in the final subjects of medicine, surgery, and midwifery, and express their final views in the following sentences:

When great internal educational reforms are being proposed, it is hardly the time for the University to commit itself definitely to any system of examinations beyond its own control. We are satisfied by the evidence we have taken that the examinations of the Conjoint Board are admirably arranged and efficiently conducted. It is claimed as their chief merit that the examiners appointed are teachers, and teachers at their best; that they are chosen from all the London Medical Schools under conditions which ensure that they are men in the middle period of their career, whose powers are at their highest. This is as it should be, but we cannot tell what the state of things would be if any far-reaching change of the organization of clinical teaching, such as we have proposed, should be introduced; and in these circumstances we cannot recommend that the University should agree, perhaps irrevocably, to the examination of its students by examiners appointed by an external authority.

So far as we can gather, the idea of the Commissioners is that the Royal Colleges should continue as at present. If, therefore, the teaching university conceived by the Commissioners comes into existence, the position of the Royal Colleges in London will be very similar to that of the Royal Colleges in Edinburgh. We have already quoted (BRITISH MEDICAL JOURNAL, April 19th, p. 838) from their report the most important passages in which the Commissioners deal with the grievance of London medical students that they are debarred by circumstances from obtaining a university degree in medicine. The Commission recognizes that so far as entrance to the University is concerned the average London student has been under a real disadvantage in the past, partly because the present matriculation examination is not connected with a well-developed system of secondary education, and partly because the Conjoint Board and the General Medical Council accept standards of admission to the medical curriculum which the University will not accept, so that students do not realize until too late that they are excluded from the beginning of their course from taking a university degree. The Commissioners regret that so large a proportion of medical students in London do not graduate from its university, but state that the difficulty resolves itself into one of defective early school education, and that the true solution is to institute a proper system of school examinations.

THE ADMISSION OF STUDENTS TO THE UNIVERSITY.

We may now, in concluding these articles, give a short account of the scheme of the Commissioners for the admission of undergraduates to the University.

The Commissioners recommend that the normal qualification for admission to the University should be a school examination based upon the curriculum of the school, conducted in the interests of the school itself, and closely related to its curriculum.

The Commissioners consider that the study of the preliminary sciences should not be included in the medical curriculum, and an undergraduate should not be admitted to the Faculty of Medicine in the University until he had received thorough instruction in the principles of pure science, and that whenever possible the best time and place for this instruction is the last two years of a good secondary school course. A certificate of having passed such an examination, which should not be taken until the pupil has reached the age of about 18, should be the normal qualification for registration as an undergraduate. The Commissioners recommend that the first step the University should take should be to cease to admit pupils in schools to its own examinations, and that no student should be registered as matriculated until he has attained the age of 17. A boy intending to become a medical student who had passed the lower school examination at the age of 16 would remain at school and continue the course of his general education, but during the last year and a half or two years would work at special subjects, physics, chemistry, and, "if possible," biology, for the higher school examination to be taken at 18.

The Commissioners do not recommend the continuation of the system under which the Conjoint Board in England and the General Medical Council have recognized secondary schools for the teaching of preliminary sciences; they consider that the responsibility of deciding what schools are efficient in this respect should lie with the Board of Education, which in estimating whether the teaching in any school reached the standard and character required would be guided by the opinion of the universities as to the standard of knowledge requisite. The Commissioners add the following very important qualifications of this opinion:

We do not know how soon the number of schools may become sufficient to give the necessary instruction to the majority of those seeking to enter the medical profession, but we are convinced that the aim should be to increase their number sufficiently for the purpose. Meantime the teaching of those candidates who have been unable to obtain the necessary instruction at school should be provided for either in the science laboratories of the University itself or in institutions recognized for the purpose by the University. There is another class of student who may desire to study medicine, and who has not reached the necessary standard in the Preliminary Science subjects at school because the course of his secondary education has followed other lines. This class of student will continue to exist after the provision of secondary schools is complete; but it will not be a large class, and for these it ought not to be difficult for the University to continue to make the necessary arrangements. But these arrangements will, as we have pointed out in paragraph 92, be incidental. We think, however, that neither class of student should be admitted to the regular undergraduate teaching and examinations of the Faculty of Science, but that they should be dealt with in special classes and examined at the close of the course by a general examination of the kind described below (see paragraphs 384, 385) as suitable for students in schools of the University.

With regard to biology, a further qualification is found necessary, inasmuch as the subject differs from physics and chemistry in more than one respect. Upon this point the Commissioners say:

In the first place, the number of schools teaching biology is far smaller than that of the schools teaching physics and chemistry, and is likely to remain so. Its teaching is much more expensive. A separate laboratory is required, specially arranged and exclusively reserved for this science; more trouble is involved in providing the necessary materials, and the number of pupils who wish to take the subject is small. Secondly, the study of this subject cannot be carried beyond the most elementary stages by the methods of instruction which hitherto have generally been employed in schools. Even in the case of physics and chemistry, some change in the method of instruction may be desirable, and is, in fact, being introduced. But biology must be approached with a certain independence of mind, and the better opinion is that it is more profitably studied under conditions of freedom and intellectual responsibility which are not commonly reached till the stage of pupilage is past. Nevertheless, we think that these conditions are present in the upper forms of the great public schools, and in some other schools in which special provision is made for the study of biology; and whenever this is the case it is a gain that this subject should be included in the school curriculum of boys who stay at school till the age of at least 18.

The prospective medical student would, therefore, have to pass two examinations at school. A lower school examination, planned for pupils of about the age of 16, which should be a test of general education; and a higher school examination, planned for pupils of about the age of 18, which should be suitable as a test for pupils whose course had to some extent been specialized. A student admitted on the higher school examination would, if the appropriate subjects had been taken, be excused from the Preliminary Science examination, and would be admitted direct to the Faculty of Medicine, his course in the university being shortened to four and a half years.

A student admitted on the lower school examination and a student admitted on the higher school examination,

in which the science subjects had not been taken, would be required to pass a Preliminary Science examination before admission to the Faculty of Medicine.

The Matriculation examination (to which pupils in schools would not be admitted) would be retained for those students who did not approach the university through the normal avenue of the secondary school. Students of mature age desiring admission to a constituent college or university department would be submitted to a special test approved by the Senate and conducted by the Faculty he desired to enter.

Nova et Vetera.

THE LEGEND OF THE ENGLISH TAIL.

In the British Medical Journal of October 17th, 1908, we discussed the meaning and origin of the epithet *Caudatus* (tailed), which was applied to Englishmen as an opprobrious nickname all through the Middle Ages. It was concluded that the clue to the meaning was to be found in a tradition that the fishermen of the English coast received St. Augustine and his fellow missionaries with insults, in particular fastening fish tails to their garments. For this a curse was laid upon them by the saint that their descendants should be born with tails. On the Continent this legend grew into a popular belief, especially among the French, who avenged their many defeats by their hereditary foes by calling them *coués* (tailed). With the notion of an actual physical deformity was mingled the idea of want of courage, the French *couard* and the Italian *codardo*, from which the word "coward" is derived, being connected with *cauda* or *coda*, the tail. In heraldry a lion *couard* has his tail between his legs. M. Louis A. Barbé has recently discussed what he calls The Story of the "Long-Tail" Myth, in a chapter of his interesting book entitled *In Byways of Scottish History* (Blackie and Son, Ltd., 1912). He produces an abundance of evidence from mediaeval literature showing that the belief that Englishmen had tails was accepted in a literal sense. A typical example occurs in a mediaeval poem communicated by Professor Wattenbach to the *Anzeiger für Kunde der Deutschen Vorzeit* (1874). There the Englishman is described in the following unflattering verse:

> Anglicus a tergo caudam gerit: est pecus ergo;
> Cum tibi dicit "Ave," sicut ab hoste cave.

M. Barbé traces the legend through chronicles and popular literature from the twelfth to the seventeenth century. Only two or three instances need be cited. When Richard Coeur de Lion was betrayed and brought as a prisoner before the King of Allemayne he represented himself and his companions as pilgrims, but the king replied with a jeering allusion to their tails. A poem, dated about 1430, celebrating the exploits of Joan of Arc, opened with the words *Arrière, Englois coués, arrière!* When, in 1436, the English evacuated Paris, which they had held for sixteen years, the inhabitants shouted after them in derision, "Tails, tails!" In the sixteenth century the English king is described as wearing a tail. By the seventeenth century the tradition had almost died out, and when allusion to the *quoues* English was made in a French poem, a footnote was appended to the passage explaining that the epithet was justified by the fact that in most Englishmen the end of the os sacrum, called "coccyx," actually protrudes and forms a tail!

Even at the present day, says M. Barbé, the old cry has not died out. In Guernsey, where it was once so frequently heard, the country children have a custom of throwing at passers-by a hairy, clinging weed which grows abundantly by the wayside. If any of this sticks to the victim's clothes, he is assailed with cries of "La Coué!"

The legend of the tail seems to have long persisted in Cornwall. Mr. Baring Gould, in his *Myths of the Middle Ages*, says that, as a child, he firmly believed, on the authority of his nurse, that all Cornishmen were born with tails.

It was natural that the Scots should adopt the taunt which they had learnt from their Continental allies. Many examples of allusions to the supposed tails of Englishmen, taken from Scottish literature ranging from the thirteenth to the sixteenth century, are given by the author. The festivities accompanying the christening of the infant son of Mary Queen of Scots on December 17th, 1566, included a masque written by George Buchanan, in which figured satyrs wearing tails. As the mummers passed the English guests they put their hands to their tails and wagged them, thus nearly causing a brawl.

The earliest account of the origin of the legend is given by Goscelin, a monk of Canterbury, who wrote a life of St. Augustine, based on older records and embodying local tradition as it existed before the Norman Conquest. Two versions of the life of Augustine are given. Both agree that the outrage on the saint and his companions occurred in Dorsetshire. The episode reappears about the middle of the twelfth century in the *Gesta Pontificum* of William of Malmesbury, who names as the scene of the event Cerne, a village where a ruined abbey now exists, about seven miles north of Dorchester, while Robert Wace, the Anglo-Norman poet, in his *Brut* says it happened in Dorchester itself, which is five or six miles from the sea; otherwise the legend is substantially the same. Layamon, who translated, or rather paraphrased, Wace's poems in old English, states that foreigners by that time attributed to all Englishmen indiscriminately the tails with which only the actual offenders and their posterity were afflicted. He says the tails were called "Muggles" and the men who wore them "Mugglins." The scene of the insult to St. Augustine was in course of time transferred to Strood near Rochester, where, it was alleged, "tayles of thornback or like fishes" were attached to St. Augustine and his brethren. It may here be stated that Æneas Sylvius, afterwards Pope Pius II (1405–64), who was in England in 1435, on his way to fulfil a secret mission in Scotland, mentions Strood, "whereof the natives are reputed to be born with tails."

It would seem that two legends became confused, the original story about St. Augustine being replaced or supplemented by a tradition that the docking of the tail of St. Thomas à Becket's horse by the people of Rochester was punished in the same way as the insult to the older saint. From the middle of the sixteenth century the legend begins to die out. Writers mention it only to scoff at its absurdity. In the seventeenth century, however, a trace of it is found in the attribution of tails to the men of Kent. Andrew Marvel, in his *Loyal Scot*, says:

> For Becket's sake Kent always shall have tails.

In his *Worthies of England*, Fuller, discussing the origin of the nickname, states that the saying is "first of outlandish extraction and cast by Forrainers as a note of disgrace on all the English, though it chanceth to stick only on the Kentish men at this day." He thinks the nickname arose from the fact that the county of Kent lies nearest to France, and the French were the originators of the calumny. Barbé concludes that the actual possession of tails by Englishmen was accepted as a fact from the outset. His explanation is that the insult offered to St. Augustine, about which there is no ground for scepticism, was believed to be worthy of punishment in the same way as the disrespect of the children who called the Prophet "bald head" was visited upon them. The conviction that this ought to be the case easily led to the assumption that it actually was. The nature of the punishment was suggested by the offence. The legend found ready acceptance in a credulous age, and with the various connotations of "tail"—"beast," "coward," and so forth—supplied a term of insult of which "our fair enemy France" and her ally Scotland were glad to avail themselves.

The belief was, however, by no means confined to these countries. Fazio degli Uberti, an Italian poet of the fourteenth century, refers to England as an island where people are born with short tails, such as are seen in stags and other beasts. Boccaccio also mentions that certain Englishmen are born with tails. The legend is a striking example of credulity accepting as true a statement the falsity of which could so easily have been ascertained. But it must be remembered that even at the present day there are among us many people who seriously believe that a man

has one rib less than a woman because a rib was taken from Adam to form Eve. Perhaps the tail legend should be taken as an unintended compliment implying that English warriors did not show their backs to their enemies. All nations, even at the present day, are too ready to believe the most absurd things about foreigners. The ease and rapidity of communication nowadays has led to the decay of such superstitions as that Frenchmen feed on nothing but frogs and Germans on sauerkraut. But there still remains the general idea that a foreigner is somehow differently constituted from ourselves. This makes the ridiculous legend that Englishmen bore about them the mark of a beast in the shape of a tail all the more amusing.

LITERARY NOTES.

La Revue Mensuelle de physiothérapie pratique is the name of a new periodical devoted, as its title imports, to physical methods of treatment. The journal is intended for practitioners, and it therefore deals with essentially practical subjects. The editorial secretary is Dr. Duhain, of Lille.

In an article which appeared in the BRITISH MEDICAL JOURNAL of May 3rd (p. 959) we referred to "Tom Sawyer, late Nockemorf." We have to entreat forgiveness for a momentary aberration which led us to give the immortal "Bob" the Christian name of Mark Twain's delightful creation. At the same time we apologize for having inserted a superfluous apostrophe in the name of Sawyer's predecessor in the Bristol practice, "Nockemorf," especially as the superior literary person now *naso suspendit adunco* the author of Pickwick. But we are sure that many of our readers are lovers of Dickens, and to them the mistake in Bob Sawyer's name must have come as a painful shock.

Messrs. Jack announce *The Battlefields of Scotland*, by T. C. F. Brotchie, F.S.A.Scot. During the summer of 1912 Mr. Brotchie, in the course of a tour over all the Scottish battlefields, from Culloden in the north to Flodden in the south, made a number of crayon drawings. These drawings, which are included in the present work, form a valuable record of this phase of Scottish history. The book also contains a map showing the sites of the various battles.

A volume entitled *Matriculation Albums of the University of Glasgow, 1728 to 1858*, has just been issued by Messrs. MacLehose. It was compiled by the late Mr. Innes Addison, Registrar of the University. For a long time matriculation was compulsory only on "gown" students whose intention it was to proceed to a degree, and those who wished to have a vote on the election of the Lord Rector. Till 1843 the lists cannot be taken as complete. Mr. Addison tried to trace the after-career of the students whose names were entered on the matriculation roll, and in this laborious task he met with a "gratifying measure of success."

Visitors to an exhibition held some years ago at Earl's Court will doubtless remember a room containing a quantity of Nelson relics, amongst which was the first letter written by the hero of Trafalgar after the loss of his right arm. Nelson was not naturally ambidextrous as this irregular straggling writing testified; but that he quickly gained a certain amount of facility in writing with the left hand is proved by the signature reproduced in the April number of *The Child*, to which Dr. H. Macnaughton-Jones has contributed an interesting article on ambidexterity. According to Dr. Macnaughton-Jones the modern system of teaching children to write and draw with either hand is by no means a new one. Apart from the warlike Scythians, who are said to have been ambidextrous from birth, there is reason to believe that the ancient Egyptians were trained to use both hands, whilst ambidexterity has been a common trait amongst the Japanese of both sexes ever since Japan has had a history. In Persia at the present day a large proportion of workmen are ambidextrous, whilst the signing of letters and documents is usually done with the left hand. In Europe the teaching of ambidexterity has only in recent years found its way into the schools. It is interesting to find, however, that several famous artists, including Leonardo, Holbein, and, in our own day, Landseer, used the left hand freely when painting. Landseer, indeed, has even been known to draw different objects with either hand at one and the same time. Dr. Macnaughton-Jones strongly advocates the training of children in the use of the left hand from their earliest infancy, regarding it not merely as a useful accomplishment, but as an excellent mental and moral discipline. The same number of *The Child* contains a short article on the hygiene of the ear by Mr. C. A. Adair-Dighton, and an interesting description by Mr. G. C. Brown of the College for the Higher Education of the Blind at Worcester, the only public school for blind boys in the kingdom.

In the *Chronique Médicale* of May 1st we find the following story which shows how malingering was treated in the Reign of Terror. The painter David had a particular affection for his pupil Gérard. Wishing to give the young man a proof of his sympathy and esteem, the famous Republican painter caused him to be chosen a member of the jury appointed to try Queen Marie Antoinette. Gérard was by no means anxious for the "honour" thus thrust upon him, but timidity and the fear of offending his master prevented his declining the nomination. Seeing no other way of getting himself exempted from service, he pretended to be lame, and, shutting himself up in his studio, practised walking on crutches. David came several times to stimulate the zeal of his pupil, which was too lukewarm to please the *atrox animus* of the revolutionary. Gérard pleaded the pain in his leg as an excuse. This state of things lasted several days, when one of the most noted leaders of the Revolution came to see Gérard, whose talent he greatly admired. The young painter escorted his visitor to the bottom of the stairs, pretending to walk with great difficulty. When he was alone, however, he put his crutches over his shoulder and quickly ran up the stairs, on a landing of which he was met by Madame Fourcroy—probably the wife of the famous chemist. He hastily attempted again to play the cripple, but the lady said, "Do not be alarmed, sir. I have guessed the motives of your action, and respect them too much not to keep silent." David, too, had suspected the truth. The next day he called on Gérard, when the following significant conversation took place: "You don't wish to be on the jury?" "No, I can't. They would be obliged to cut off my leg if I did so." "Ah, really! Well, something else will be cut off." "What is that?" "There is a rumour about that you are an aristocrat, and if you don't come you will be guillotined." These words wrought a miraculous cure. Gérard threw away his crutches, and took his place in the jury-box.

In his delightful book, *A Wanderer in Florence* (Methuen and Co., 1912), Mr. E. V. Lucas refers to a curious piece of medical folklore which still survives at Florence. When Pazzo de' Pazzi, a founder of the family, was in the Holy Land during the First Crusade, it was his proud lot to set the Christian banner on the walls of Jerusalem. As a reward Godfrey de Bouillon gave him some flints from the Holy Sepulchre. These he brought back to Florence, and they are now preserved at SS. Apostoli, the little church in the Piazza del Limbo, off the Borgo SS. Apostoli, and every year the flints are used to kindle the ritual fire for Easter Day. Gradually the ceremony was expanded until it became a great spectacle, which was for centuries under the direction of the Pazzi family. A car containing explosives, after being drawn in procession through the streets by white oxen, is ignited by the sacred fire borne to it by a mechanical dove liberated at the high altar of the Duomo. With its explosion Easter begins. "This," says Mr. Lucas, "is a great moment not only for the spectator but for all Florence, for in myriad rooms mothers have been waiting, with their babies on their knees, for the first clang of the belfries, because if a child's eyes are washed then it is unlikely ever to have weak sight, while if a baby takes its first steps to this accompaniment its legs will not be bowed."

The fame acquired by the Italian shrine of Loreto led to the opening of what may be called branch establishments in other countries. Of such shrines Scotland, we learn from Mr. Louis A. Barbé's *Byways of Scottish History*, possessed at least two. One was in Perth, the other, of greater reputation, was beyond the eastern gate of Musselburgh on the margin of the links. This was founded in 1533 by one Thomas Douchtie, or Duthy, who had long been a captive in the hands of the Turks. There is a charter of James V, dated July 29th, 1534,

confirming the grant by the bailies of a "petra" of land in the territory of Musselburgh to Thomas Duthy of the order of St. Paul, first hermit of Mount Sinai, for the erection of a chapel in honour of Almighty God and of Blessed Mary of "Laureto." The king also gave a quantity of vestments and altar linen for the use of the chapel, and himself went thither as a pilgrim when he made further gifts at the shrine. The foundation throve under this royal favour, and Sir David Lyndsay testifies to the crowd which went

> Under the forme of feinzeit sanctitude,
> For till adore ane image in Laureit.

Against the hermit himself he brought the charge that

> He pat the common peple in beleve
> That blynd gat seycht and crukit gat their feit,
> The quhilk that palyard no way can approve.

The popularity of the shrine was increased by the claim put forward that, in addition to its general healing powers, it possessed a special obstetrical virtue. The success of Duthy's venture naturally excited jealousy. In his *History of the Scottish Kirk*, Calderwood relates how one John Scott, "a landed man," having failed to get himself accepted as a partner in the enterprise, set up in competition. He erected an altar in a chamber near Edinburgh, whereon he set his daughter, a young maid, and wax candles about her burning, to be worshipped in place of the Virgin Mary. This did not prove successful. Scott seems to have been an early hunger-striker, though, it would seem, not to escape punishment but to demonstrate that he was a special object of heavenly protection. Calderwood says:

> Before his departure out of this country he had succumbed in an action of law, and because he was not able to pay the sum which the other party had evicted he took sanctuary at Holyrood House. There he abstained from meat and drink certain days. The bruit of his abstinence coming to the King's ears, the King caused put him into David's tower in the Castle of Edinburgh and bread and water to be set beside him. He abstained from eating and drinking thirty-two days. When he was let forth the people came flocking to him. He uttered many idle speeches, and among the rest that by the help of the Blessed Virgin he could fast suppose never so long time. He went to Rome, where he was committed to prison by Pope Clement till trial was taken of his abstinence.

After he had given a similar exhibition at Venice he got 50 ducats to pay his expenses to Jerusalem. Passing through London on his return, he was imprisoned for a harangue against Henry VIII, "but was set at liberty after he had been keeped fifty days, all which space he abstained from meat and drink."

SCIENCE NOTES.

At a recent meeting of the Royal Society, Professor J. H. Priestley and Mr. R. C. Knight communicated the results of some curious observations on the nature of the toxic action of the electric discharge upon the *Bacillus coli communis*. They found that the electric discharge in air was fatal to bacteria, and that the effect is due to the products of the interaction of the constituents of the air—namely, nitric and nitrous acid and ozone. Discharge in air-free hydrogen had no deleterious effect on the organisms, but the presence of small quantities of air allowed the formation of a toxic substance, probably hydrogen peroxide, which exerted a bactericidal action. It therefore followed that electric discharges in which the current density did not exceed 10^{-5} ampères per square centimetre did not exert any directly toxic action upon micro-organisms, a result contrary to statements made by some previous investigators.

Schryver and Singer have shown that in cases of simple ulcer on the lesser curvature of the stomach the analysis of the stomach contents after a test meal is often almost identical with that given in the case of gastric carcinoma; but when the lesion is situated in the pylorus, be it simple or cancerous, either a normal analysis or hyperacidity is obtained. In duodenal ulcer there is almost always hyperacidity. In cancer of the body of the stomach it is usual to find a condition which may be described as achylia, and this is indicated not only by the absence of hydrochloric acid, but also by the very low amount or practical absence of pepsin and the small amount of total chlorides. In healthy gastric juice they find that about 2.4 is the "nitrogen factor"—that is, the ratio of difference to titration to methyl orange and phenolphthalein divided by the amount of nitrogen—and any increase of this factor above 2.8 is diagnostic of delayed emptying of the stomach.

Dr. Wheeler has carried out at the Home Office Experimental Station at Eskmeals a series of experiments[1] called for by two dust explosions—one at a provender mill in Glasgow and the other in an oil-cake factory in Liverpool—each attended by serious loss of life. In these experiments several kinds of dust were dealt with so that the degree of their inflammability should be determined as well as their capacity to transmit explosions. Dust was taken at random from the beams and crevices in factories. In all sixty-six samples were taken. Attention was in the first place directed to the separation of harmful and harmless dusts and to the temperatures at which the dangerous dusts readily took fire. Some dusts readily ignite and propagate flame, the source of the heat for ignition being small, such, for example, as that from a lighted match; other dusts become readily ignited, but for the propagation of flame there is required a source of heat of large size and high temperature (an electric arc) or of long duration (the flame of a Bunsen burner); and there are also dusts which are incapable of propagating flame under any conditions likely to obtain in a factory. Sugar, starch, and the ground grain of many cereals come under the first class of dusts; oil products, sawdust, and leather under the second. Sugar, dextrine, starch, and cocoa are the most dangerous, sugar exceptionally so. It ignites when projected as a cloud against a surface heated to below red heat, and when ignition takes place the flame travels with great rapidity through the dust cloud. The temperature at which ignition of the different kinds of dusts takes place varies. Dr. Wheeler reduced the various kinds of dust as far as possible to the same degree of fineness by passing them through a 200-mesh sieve. For the sake of comparison the temperature of bituminous coal dust was determined and found to lie between 1000° C. and 1100° C. Some dusts of a fluffy nature could not be passed through a sieve. The ignition-temperature of briquette dust was found to be 1090° C., chicory 1070°, flour 1060°, starch 1035°, tea 1010°, oil cake 945°, and dextrine 940° C. The inflammability of combustible substances is regulated by the rapidity with which oxidation can be effected so as to produce flame. It is therefore a question of the affinity of the combustible material for oxygen. Physical conditions, too, are not without influence, a circumstance which explains the greater inflammability of coal dust than coal in the lump. The finer the dust the greater is its inflammability. From such dusts as those alluded to inflammable gases are evolved which form with atmospheric air inflammable mixtures. Should such a mixture of gas and air become ignited, sufficient heat would be provided to cause inflammation of an adjoining layer of air and dust, and thus initiate an explosion. In a series of tables Dr. Wheeler gives the lowest temperatures at which ignition can be effected. The report is an interesting and valuable contribution to an important subject.

[1] Report on the Inflammability and Capacity for Transmitting Explosions of Carbonaceous Dusts, etc. By R. V. Wheeler, D.Sc. 1913. Price 1½d. (Cd. 6562.)

Dr. Hearsey, P.M.O. of the Nyasaland Protectorate, in his *Sleeping Sickness Diary*, Part XIX, states that during the preceding quarter 15 additional cases of human trypanosomiasis were reported; of this number 12 were found by Dr. Shircore and 2 by Dr. Conran in the sleeping sickness area; the remaining case was notified by Dr. Morgan from the Marimba district; these added to the cases previously reported made a total of 108. Dr. Hearsey points out that so far some 10 cases of trypanosomiasis have been discovered in or found to be derived from the districts lying to the north and south of the proclaimed area. This indicates that the factors necessary for acquiring infection are not limited to the Dowa subdistrict. Much difficulty has been experienced by medical officers owing to the natives refusing to present themselves for examination and also hiding their sick. This, however, had been to a great extent overcome in the proclaimed area of the Dowa subdistrict by the employment of special police.

British Medical Journal.

SATURDAY, MAY 10TH, 1913.

THE SITUATION IN SOUTH WALES.

THE acuteness of the situation in South Wales, where the relations of the medical profession to the Insurance Commissioners and certain organized bodies of workmen are strained almost to breaking point, affords good reason for dealing at some greater length with the position than was possible last week. If there was a part of the kingdom in which it might have been prophesied that the National Insurance Act might work with the minimum of friction the industrial areas of South Wales would probably have been selected. Medical practitioners there had for generations been accustomed to work on a contract system, and, indeed, in some districts practically no other kind of practice was known. The special needs of the poundage contract systems seemed to be met by that otherwise objectionable subsection of Section 15 of the Act known best as the Harmsworth amendment. Wales is believed to be strongly Radical in its political tendencies, and it might naturally be supposed that every effort would be strained by the administrators of the Act, paid and honorary, to make it a popular success in the home of its author. The Act has more than once falsified expectations, but never more than in this case. While it may be said that over Great Britain generally it is working with less friction than might have been anticipated we find that in the mining and industrial areas of South Wales apparently nobody is pleased. The public, the Commissioners, the Committees, and the doctors are all dissatisfied.

As regards the poundage systems, which have in many areas supplied medical attendance for workmen and their families to the general satisfaction of all concerned, an unexpected obstacle arose when the Welsh Commissioners declined to approve their continued existence under Subsection 15 (4) as institutions existing at the time of passing of the Act, unless a committee were set up whose duty it would be to receive the money of the workmen, pay the doctors, submit audited accounts, and perform other functions which would doubtless in time extend to the complete control of the doctors unfortunate enough to be in their employment. It did not matter that the schemes had worked perfectly well for years in most cases without any such committee; that the deductions had been made at the office of the mine or works and paid direct to the doctor; that unless the new committee was to prove superior to the temptation of making deductions for various purposes from the workmen's contributions the only items on the balance sheet would be, on the one side—collected so much; on the other—paid to the doctor the same amount. The vested interests of the doctors who had been making their livelihood through these schemes were apparently also deemed to be of no consequence, though we know that it was the vested interests of the friendly society medical aid associations which led to the insertion of the Harmsworth amendment in the Insurance Bill. In spite of the protests of the doctors, and also of the workmen in some of the areas where they are quite content with the old arrangement, the Commissioners have insisted on the institution of committees of workmen. The medical men in these areas, to their great credit, have for the most part flatly declined to have anything to do with such committees. They have proved them to be unnecessary, and they know from sad experience what it means to members of the profession to put themselves under their yoke.

But there were areas where such schemes were not in operation at the time of the passing of the Act, and where, in consequence, it appeared they could not now be set up. The ingenuity of some of the Welsh Insurance Committees, encouraged it appears by the Welsh Commissioners, has proved equal to the emergency. Why not try Subsection 15 (3) of the Act, which allows persons, with the permission of Insurance Committees, to make their own arrangements? It is true that Dr. Addison, the author of this subsection, never dreamed of its being used to set up what amounts to a new creation of "Harmsworth institutions," nor was it suggested to Parliament when the matter was being debated that the subsection was intended for this purpose. But such small obstacles as these could not be allowed to stand in the way of large bodies of workmen who saw the chance not only of getting their dependants attended cheaply by the aid of the money allowed for attendance on insured persons, but saw in it an opportunity for getting the local profession under lay control in a manner much more effective than anything possible under the panel system. Accordingly a considerable number of "schemes" have been floated in Monmouthshire and Glamorganshire in which it is proposed to offer an inclusive sum to the doctor for attendance on a number of insured persons and their dependants, the funds being obtained by pooling the 6s. 6d. of the insured person, *plus* small extra contributions on behalf of the dependants. Several of these schemes have already been approved by Insurance Committees.

A very interesting feature about these schemes is that, unless they are entirely *ultra vires*—an opinion which we strongly hold—they only need the approval of the Insurance Committee, and do not require that of the Commissioners. That is to say, that a scheme which, had it been in operation at the time of passing of the Act, would, if it sought approval under Section 15 (4), have been restricted in the most careful way by the Regulations of the Commissioners, is under Subsection (3) to be allowed to be established without any of these safeguards. Take an instance which is quite within the bounds of probability. A scheme is set up consisting of 1,500 insured persons with their dependants, and pays its doctor £700 a year. If we assume that the dependants average two to each insured person the doctor of the scheme will be required to attend 4,500 persons. The committee working the scheme would receive from the Insurance Committee 6s. 6d. for each insured person—that is, £487 10s.; therefore, the 3,000 dependants would only need to find £212 10s., or 1s. 5d. a head per annum. Now, it is obvious that the person who gets his or her attendance for 1s. 5d. per annum is getting it at a rate which is ludicrous. The inevitable result of a system under which insurance funds were used to subsidize a system of this kind would be to depress the standard of medical attendance on the whole 4,500. We have no hesitation in saying that any Insurance Committee which permits its money to be used in

this way is guilty of aiding and abetting the defeat of the ends aimed at by Parliament in granting the rate of 6s. 6d. a head for insured persons. We go further and say that, in spite of the fact that Subsection 15 (3) leaves the right of allowing persons to make their own arrangements in the hands of the Insurance Committees, and apparently does not contemplate any supervision on the part of the Commissioners, any body of Government officials which acquiesces in the institution of such schemes is guilty of a dereliction of duty to the State and to the insured persons for whose medical treatment they are responsible.

It is instructive to note the difference between the action of Insurance Committees in Wales in connexion with this subsection and that of the Committees in England and Scotland. It has only been with the greatest difficulty in most insurance areas in England and Scotland that even thoroughly deserving cases have been allowed to "make their own arrangements." In Wales the Committees are apparently willing to allow it on a wholesale scale and the Commissioners look on with complacency. The whole situation appears to us to be a grave public scandal. In protesting against it the profession in Wales will receive the sympathy and the whole-hearted support of the Association. In resisting the imposition of lay control in its most repugnant form they are doing a service to the profession and to the public. We would say again that the case is eminently one for the exercise of the powers of co-ordination in regard to medical benefit which are possessed by the Joint Commissions. If there is ever to be a case for their intervention, this is one. We understand, indeed, that the points at issue have been brought prominently before Ministers and the Joint Commission, and are receiving their serious attention, so that it is not likely that a decision will be arrived at without a full consideration of all sides of the case. Parliament rose for the Whitsuntide recess last Thursday, and it is not anticipated that an announcement will be made on the subject for two or three weeks.

THE CONDUCT OF LABOUR WITHOUT INTERNAL EXAMINATIONS.

CAN confinement cases be conducted safely and efficiently without vaginal examinations? If they can be so conducted, then internal examinations should be abandoned, for it is easy to show that they introduce an element of risk into labours which apart from them would be free from danger. The risks are nowadays well known. There is, first, the introduction of infection from without, and even the expert obstetrician occasionally, with all his aseptic precautions, may carry into the vagina, on his fingers, gloves, or instruments, microbes of diseases with which he has been in touch. How much more the midwife or the inexpert or incautious! There are also microbes in the vagina or near to it which, whilst they are confined to that canal and its surroundings, seem to be less virulent than usual, but become dangerous when they are carried up by examinations to its upper part and into the neighbourhood of cervical cracks or erosions. They constitute a second risk, that of infection from within; and this risk is intensified by vaginal examinations. Professor Charles M. Green, of Harvard University, who has been writing on this subject,[1] states another objection to internal examinations in midwifery—namely, that they are distasteful and even painful to the parturient woman, especially when she is a supersensitive primipara.

Now the real question to be settled at the present time is this: Granting that internal examinations in labour, even when practised by obstetric experts, introduce an extra risk into the management of confinements, is there any way in which the diagnostic and prognostic purposes for which they are made can be obtained otherwise? Professor Green and a good many other teachers think that the external examination, which is free from risks, may be safely regarded as a sufficient substitute; and it is true that if it be carried out as these obstetricians advise, and with the *tactus eruditus* which they possess, it must be ranked high both in diagnosis and prognosis. But it is not everyone who can by noticing the movements of the unborn infant "map out the fetus by sight," detect by palpation "the presence of a complicating neoplasm and locate the placenta," or gauge the normal amount of liquor amnii after the rupture of the membranes. Further, we fear the practice of the "Pawlik grip" would upset a supersensitive primipara as much as, if not more than, a vaginal examination. These, however, are objections which it is safe to say may be largely overcome by proper teaching and by persistent practice, but there are others which are not so easily disposed of.

How, for instance, is progress in the dilatation of the cervix to be measured if not by internal examination? How are pelvic contractions, still more vaginal septums and bands, the presence of a dermoid cyst in the pelvic cavity, and such anomalies as prolapse of the cord in labour, to be discovered so as to allow of proper treatment being instituted at a suitable and sufficiently early time? It may be urged—and this is the view which Professor Green apparently takes—that if labour goes on normally and terminates within reasonably normal limits of time, there is no need to know about the dilatation of the cervix. But the detection of the pelvic and other anomalies is a more difficult problem, and it is just here that we are in cordial agreement with the Harvard professor. He says, Let every pregnant patient be under the care of her medical attendant from the early months of her pregnancy; let the pelvis then be measured externally with care, and search made for any existing condition likely to make the future labour abnormal; nay, more, let a thorough bimanual examination be made. But why should an internal examination be advised in the early months and forbidden at the time of labour? Will the supersensitive primipara be likely to submit more willingly at the former than at the later time? No; but the reason, of course, is that in the former case there are no abrasions and tears in the cervix and vagina, and the uterine cervix is closed, and the risks of bacterial infection very small. This is a very important point, and it is well to emphasize it; in order to enable us to conduct labours without internal examinations in labour we must make these examinations in early pregnancy. To what, then, does this conclusion lead but to the value of diagnosis in pregnancy, and through it we reach the prematernity ward or pavilion about which we have spoken more than once (*vide* JOURNAL, February 8th, p. 297)? Curiously enough, Professor Green has apparently reached the prematernity ward himself, although he gives it no special name, for here is what he says: "Even in my hospital more and more women have year by year been led to make early application for pregnancy care and observation, until finally a clinic has been established, with a special staff, to carry on this work for

[1] *Boston Medical and Surgical Journal*, vol. clxviii, April 10th, 1913, pp. 525-530

hospital patients and out-patients alike, and the same advantages are extended to the poor as to the private patient." Assistance may be forthcoming from the radioscopic investigation of pregnancy and labour. At first much was expected from this means of diagnosis and yet comparatively little was obtained on account of technical difficulties, fetal movements (which the *x* rays seemed to stimulate), and the deep breathing of the mother; now, however, the radiographers of some of the Parisian hospitals seem to have surmounted all obstacles and are able to give reliable skiagrams of obstetric conditions and even to show the fetus at the fourth month.

Whilst all these things are true—whilst, by making use of careful external inspection, palpation, and pelvimetry in labour, and whilst, by carrying out internal examinations in the early and even in the later months of pregnancy, there will be less need of the vaginal examination in actual labour, yet it cannot be dispensed with altogether in all cases. Even Professor Green accepts this conclusion, for he enumerates *ante-partum* haemorrhage, eclampsia, prolapse of the cord, long delay in labour, and the complications rendering operation necessary, as conditions warranting vaginal examinations during labour. We cannot therefore answer in the affirmative the question asked at the beginning of this article; we cannot say that confinement cases can be conducted safely and efficiently without vaginal examinations. We can well agree with Professor Green when he says that "the common custom of making frequent vaginal examinations during labour is a bad one," and it deserves the name of "vaginal invasion" which he has given to it. We can go further, and look forward to the time when the doctor, by his earlier acceptance of responsibility for supervising his obstetric patients, will be able to dispense more and more with vaginal examinations at the time of actual confinement. The general institution of prematernity institutions will help also. Still, the conclusion must be that vaginal examinations cannot be entirely abolished in labour.

SCHOOL BOOKS AND EYESIGHT.

THE report of a special committee on the influence of school books upon eyesight, issued recently by the British Association,[1] is a sign of a revival of interest in the ancient and honourable craft and mystery of printing. In the beginning almost all books were beautifully printed, for the type makers gave their characters bold forms, taking the work of the manuscript writers as their model. They considered all the factors in the legibility of the page which the report we are considering enumerates, and paid regard also to the form and balance of the mass of type, to the size and shape of the page, and so got a beautiful and gracious effect. Until almost the other day, all printing was done from the actual type and on hand presses, but the hunger for knowledge and the growth of the habit of reading produced a demand for cheap books which was met at first by using cheap paper and small type, and so cramming as many words as possible on to as small a page as possible. For generations things have been going from bad to worse, for to the earlier defects have been added those due to the practice of stereotyping or casting, and the use of rapid mechanically-driven printing presses. There have always been a few printers who have kept a higher standard in view, and there have always been the old books to remind us of what a well printed book is. But until lately the general tendency has been downwards.

This has been due to the spirit of competition in commerce and the assumption that the public would prefer quantity to quality in the matter of paper and printing, and would be certain to choose the book that supplied the largest number of words for sixpence. Bargains in books would often be found to be no gain to the reader if the sum total of the effects of the reading were ascertained, and there are signs that the public are beginning to find this out. School books ought not merely to share in the improvement, but to lead the way, for only school children, students, and reviewers are compelled to read books they find trying to the sight.

The report commences with a statement of the results of the committee's inquiries into the present practice of local education authorities under the authority of Circular 596 of the Board of Education. The conclusion arrived at is that "practically no systematic attention is given to the influence of school books upon eyesight."

Four pages of the report are given to a report of the oculist subcommittee, consisting of Dr. H. Eason, Mr. Bishop Harman, and Professor Priestley Smith. This report is really the answer to the question set before the committee. The surgeons state categorically the effects that reading is likely to have on the children who read too much or begin too early. The warning given in the report of this subcommittee as to the grave danger incurred in overworking the immature eye of the young child is worthy of the most serious attention from every one concerned. No amount of provision and care in the production of school books will make up for the lack of recognition of this one point. If the report does no more than drive this simple fact home to those who are responsible for the training of the young, it will have earned the thanks of the next generation. Equally wise and cautious are the remarks of the surgeons concerning the production and increase of myopia. These four pages should be in the hands of every one who has educational charge of children. They are certain to be helpful, and technical terms which might confuse the understanding of the layman are avoided.

The third section of the report deals with the hygienic requirements with which school books should conform. The several conditions that go to make up good printing and their relation to the psychology of the reading process are set out. Similarly the requirements of special subjects such as music, mathematics, and foreign scripts are set forth. The report ends with an appendix, a glossary of technical terms, and ten pages of specimen types suitable for children's use at various ages.

The general findings of the committee as to the conditions a book which shall be "good" in the sense of legibility must fulfil may be summarized as follows: (1) The size of the type must conform to the age of the child. (2) The width of each character must be proportionate to its height. (3) The outline to the type must have sufficient strength. (4) The space between the lines, termed the "leading," must be sufficient. (5) The length of the line must be reasonable. (6) The ink must be black. (7) The paper must be white, or nearly white, hard, opaque, and without gloss.

The practice of printing has changed greatly of recent years. The extended use of machinery, "fashion," and improvements in the arts of manu-

[1] Report on the Influence of School Books upon Eyesight, by the Special Committee of the British Association appointed to inquire thereon. Pp. 34. Price 4d., from the offices of the Association, Burlington House.

facture, have changed the prevailing style of type, not always for the better. The skill of the type-founder has led him to produce founts that are a marvel of accuracy and delicacy of moulding, with hair lines that would have been the wonder of earlier printers. But the value of these improvements so far as the comfort of the reader is concerned is *nil*, rather they are a drawback. The introduction of rapid machines for printing has had even greater effects. It was unavoidable that the hand press should go, but it is a thousand pities that the bold emphatic impressions which came forth from those presses should go with them. The expression "damp from the press" tells of the way in which the old printers got their fine effects: they damped the paper. To-day most printing is more or less dry, and dry paper and thin-faced type give an effect that is not impressive to the eye of the reader, and causes fatigue and weariness. The conditions become worse when the requirements of illustrations of modern style—commonly photographs reproduced by photography—are met by the use of a highly-glazed "art" paper for the text also.

The legibility of print depends upon effective contrast. The contrast cannot be effective when the paper shines, or when it is so thin and wanting in opacity that the print of the other side shows through, or when the lines are so close that the eye is confused by their nearness. Further, the salient points of letters are mainly along their tops, so that to enlarge a letter by increasing its height is not to make it more legible; breadth is equally necessary. The point can be well seen by reference to the specimens of type given in the report. No. 1 is a large type of "modern face"; No. 3 slightly smaller type of "old face," yet the latter is legible at a greater distance than the former. The committee had evident leanings toward the superior legibility and artistic merit of the "old face," or "old style antique," and there can be no doubt of the truth of its recommendations. A page of old face type has an air of distinction that is a dignified introduction to what we may hope are pearls of wisdom in the text. For school books it should be the standard style of type. Examination of recent elementary school books shows that publishers are already turning their attention once more to this style, which seems to be the only style that can successfully counteract the evil effects of rapid machine printing on dry paper.

The report is not without defects in detail. No note was made on the binding of books—a very necessary point since the introduction of the machine staple. If these are set in from side to side, as is too often the case, the book cannot be opened flat, and therefore becomes unreadable. The Stationery Office sets a deplorable example in this respect. The scale of "leading" is inaccurate for the younger years. In school books the minimum space between the lines made by the short letters should not be less than twice the height of these letters. Some of the specimens are examples of that which should be eschewed rather than that which is commendable. No. 4 is a beautiful style of type ruined by lack of "leading." No. 5 seems to pass muster on the soft paper of the report, but on a hard paper it has an unpleasing effect like the dazzling produced by viewing a long row of palisading. The hair lines are too fine in comparison to the downstrokes—the common fault with "modern face" style. No. 6 shows a type that conforms to standard measurements in size and leading, but there is a want of strength of line, and the whole effect is "pale faced." On harder paper this would be more marked. These errors in the report show how necessary it is that printers and writers should come together again as no doubt they did in former days. If the printer knows nothing of the ideas and intentions of authors, how can he be an artist in type?

The report ends with a severe but thoroughly justified criticism on the printing of Bibles, prayer-books, and hymn-books. For the most part these books are not fit to be put into the hands of young children, because the elders who produce, vend, and buy these books are greedy. They are not content with a book of modest contents, of the size that a child can handle, done in type that a child can see. They must needs cram into that same sized book enough material to fill half a dozen, with the result that the paper is thin, the type small, and the book unreadable. So far as the Bible is concerned there is no necessity for this. The issue of the several books of the Bible in well printed volumes of convenient size is merely a matter of arrangement; the "parts" at present on sale are too cheap and poor for school use.

The whole moral of the report of the Committee of the British Association may be summed up in the words—less material and better quality.

THE AMENDMENT OF THE INSURANCE ACT.

A number of statements have appeared in the press as to the lines of the bill to amend the Insurance Act now under consideration, but we believe that they mainly represent the kind of guesswork with which we are familiar on these occasions. When the additional money was provided for medical benefit it was understood that the use of this money as a supplement to the two-ninths otherwise contributed by the State towards the cost of benefits would have to be regularized in an amending Act, and, as we suggested in a recent issue, the difficulties presented by casual labour are so great that they can scarcely escape attention during the present session. It will be remembered also that an undertaking was given by the Chancellor of the Exchequer that the Government would give attention to the contention put forward by medical men in respect of insured persons who subsequently become well-to-do. Under Section 1 (3) (*b*) such persons may continue as voluntary contributors if they have been insured for five years. The point of the medical objection is that thereby a number of well-to-do persons with incomes of more, sometimes far more, than £160 a year might be able to take advantage of the State-aided insurance. We should certainly anticipate that the Government will see to the fulfilment of that promise in the forthcoming amending bill. The grant of money made to assist in providing medical benefit for those who are insured under the Act, and were 65 years of age at the appointed day, will also probably require embodiment in the forthcoming bill.

INTERPRETING THE INSURANCE ACT.

The case Heard *v.* Pickthorne, which was decided by the Court of Appeal on May 1st, settles a point of considerable practical importance both to insured persons and to members of the medical profession. A friendly society had refused to accept the certificates of a medical man as evidence that the applicant was entitled to sick benefit on the ground that the signature was not that of a doctor on the panel. It appeared that the society had adopted a resolution "that in every instance a certificate from a panel doctor must be sent." The case was brought to the notice of the London Medical Committee, and an application was made to Mr. Justice Bucknill for an interim injunction against the defendants on the ground that the resolution and the consequent refusal were *ultra vires* and not enforceable. The judge did not issue an

interim injunction, on the ground that the matter was one which should be tried in court. It accordingly came before Mr. Justice Bailhache, who dismissed the action with costs, on the ground that the point was one which ought to be decided by arbitration under Section 67 of the National Insurance Act. The National Medical Guild, the body which has developed out of the London Medical Committee, took steps to ensure that an appeal was entered against this decision, and the hearing was expedited in view of the importance of the matter. The Court of Appeal was unanimous in holding that the action of the friendly society was *ultra vires*, inasmuch as its resolution had stated that the only proof it would accept of incapacity for work was a certificate signed by a panel doctor. The Court held that the society had no right to limit beforehand in this way the kind of evidence it would accept. When the Insurance Act was hurriedly completed in December, 1911, it was prophesied by many that it would afford a great deal of work for the lawyers and the law courts. This case is one of the earliest proofs of the truth of this prophecy, and the importance which the Courts attach to speedily setting doubtful points at rest is shown by the almost unexampled celerity with which this particular matter had been dealt with. There is, we are afraid, no doubt that the friendly societies, and at least some of the authorities created by the Act, are disposed to interpret any point in doubt to the disadvantage of the medical profession. The result in this case will encourage the profession, where it feels that it is being unjustly treated and the terms of the Act are being strained to its disadvantage, to bring the matter promptly to the arbitrament of the Court of King's Bench. The Court of Appeal in this case has shown itself jealous of its authority, and has very definitely indicated its opinion that the case was one which fell within the jurisdiction of the courts of law, and was not a matter to be settled by arbitration.

ATTENDANCE ON AGED AND DISABLED MEMBERS OF FRIENDLY SOCIETIES.

THE issue by the Insurance Commissioners for England of the Memorandum (155/A.S.), which is reproduced in the SUPPLEMENT, raises once again the question of the rate of remuneration for the attendance on those members of friendly societies who, because they were over 65 or were permanently disabled, did not become entitled to medical benefit under the ordinary arrangements made between Insurance Committees and doctors on the panel. The circular repeats, and emphasizes, that reading of the Section 15 (2) (*e*) of the National Insurance Act to which the Association has taken strong exception, and for which we can find no foundation in the wording of the section, and certainly none in the code of honour which regulates ordinary dealings between man and man. As we have repeatedly pointed out, the Association made a bargain with the friendly society representatives that if they on their part would abandon their proposed campaign in favour of inducing Parliament to reverse its decision to put the administration of medical benefit in the hands of the Insurance Committees and not into those of the friendly societies, the Association on its part would undertake that the class of members of friendly societies with whom we are now dealing should be attended at the same rate of remuneration as applied to insured persons. The Association was, of course, ready to carry out its side of the bargain, and, being unaccustomed to deal with people who hold that whether they do so or not depends on whether it pays them, ingenuously imagined that when the terms of the bargain were incorporated in the Act the last word had been said. But it did not reckon on the ingenuity of the friendly societies, or rather some of them, for they have not all tried to evade their obligations. Nor did it reckon on having the dice loaded against it by the active partisanship of the Chairman of the Joint Commission, who by official action, by innuendo, and by direct accusations of meanness against the medical profession, has done his worst to keep alive a quarrel which without his intervention would, in all probability, by this time have died a natural death. In the memorandum now under consideration an official document is used to dot the i's and cross the t's of Mr. Masterman's misreading of this subsection. We are told that the Exchequer grant of 2s. 6d. will be available for all the insured persons over 65, though not for the permanently disabled members of friendly societies who were thereby prevented from becoming insured persons. But the societies are told that if they are able to make a contract with doctors at less than 8s. 6d. for attendance and medicines, they will be able to give the contributor the advantage, by giving him an increase of his sick pay—at the expense of the doctor! But the most amazing part of the document is contained in paragraph 8, where the societies are told that the doctors on the panel can be *required* (this word is italicized in the memorandum) by the Insurance Committees to attend these classes of friendly society members at the same rate as the insured, but that the duties of the Insurance Committees "are limited to enforcing upon doctors upon the panel, if called upon to do so, one of the conditions of these doctors' contract with the Committee." In plain English this means that the doctors can be held by official machinery to *their* side of the bargain, but that the friendly societies are at liberty to do all in their power to evade their obligations and are to have resort to the compulsory powers of the Committees only if they find the doctors are not so foolish as it is hoped they will be. It is as well to have the matter thus plainly stated, and we hope the eyes of the medical profession will be fully opened to the unscrupulous nature of the opposition they have to encounter on this subject. The duty of the profession is quite clear. In spite of any leanings its members may individually have towards dealing on charitable terms with the old and disabled members of friendly societies, it must remember that on its behalf a bargain was made that medical practitioners would attend this class at the same rate as was paid for insured persons generally. The efforts of the other parties to the bargain to escape their lawful obligations, backed as they have been by official and officious interference, should only make the profession more determined that the bargain shall be kept by both sides. The problem which the friendly societies have to solve is a very small one. They now, by the terms of the circular under consideration, have 2s. 6d. towards the payment for the medical attendance on each of their members who were 65 at the passing of the Act, so that no difficulty should arise as to these. As regards their permanently disabled members who could not become insured, all the societies have to find is the difference between the old rate of payment to the doctor and the 8s. 6d. now paid for the attendance on insured persons. It must be remembered that these members have for years been insured by the medical profession for their medical attendance at a rate which the Government has admitted was inadequate even for ordinary healthy employed persons. How even Mr. Masterman can contend that that inadequate rate should be continued for the worst class from an insurance point—the class the Government refused to insure because the risk was too great—passes our comprehension, and may well pass the endurance of the medical profession.

A NEW TYPE OF CONSCIENTIOUS OBJECTOR.

DURING the passage of the Insurance Bill through the House of Commons Mr. McKenna gave an assurance that the case of those who conscientiously objected to receiving treatment from qualified medical practitioners should be considered. Their case was mentioned also in the

discussion of the amendment to Section 15 of the Insurance Act, under which certain persons might be allowed to make their own arrangements for medical attendance and treatment. A deputation on this subject was received by Mr. Masterman on May 6th, and it was promised that the Government would endeavour to see that in some way or other those persons who did not believe in the orthodox system of medicine, and were willing to make a declaration as insured persons that they wished for some other form of treatment, should be allowed to have that treatment and should not on that account lose the proportion of the money allotted to them for medical benefit. It is understood that applications have been received from different parts of the country from insured persons who wish to be treated by herbalists, Christian Scientists, and others, and it seems to be considered that the only way in which the Government promise to this class of person can be redeemed will be to devise some scheme by which they will be allowed to use the money set aside for providing medical benefit to help them to pay for "the treatment" they desire to receive. The administration of sickness benefit according to their rules is wholly in the hands of the societies. The Insurance Committees have nothing to do with the payment of sick benefit, and it will remain for the societies to decide whether they will accept certificates for sickness from herbalists and Christian Scientists. There is no indication at present that the societies are willing to accept certificates from any persons other than qualified medical practitioners.

SCHOOL MEDICAL OFFICERS IN CONFERENCE.

If anything were required to show how far the profession has travelled in the subject of the medical inspection and management of school children during the past twenty years, it is furnished by such a conference as that which met in Edinburgh last week; a brief report of it is published elsewhere. The single fact that ten years ago there was at most only one medical inspector of a school board school in the whole of Scotland and that now there are 105 such officers is sufficient to set in a high light the revolution which has taken place in this department of medical practice. Formerly the schoolmaster ruled over the school and the scholar, with the inspector exercising periodic discipline over the schoolmaster; but now the medical man has stepped upon the scene, and with him has come the realization of the paramount importance of the second part of the old adage, *Mens sana in corpore sano*. As was being said in Edinburgh last week, "physical culture is to come before the Humanities, and hygiene is to be reckoned of greater importance than higher mathematics." It looks as if it were to be a stiff contest between the leech and the dominie, with the advantage of attack on the side of the former. That one out of the four sessions into which the conference was divided was held in Dunfermline furnished the delegates with an object lesson which will not be lost either upon them or upon the profession and public generally. In the ancient Fifeshire royal burgh, the scene of many stirring historic events, the birthplace, in 1837, of Dr. Andrew Carnegie, and now a busy manufacturing town, the Carnegie Dunfermline Trustees have since 1903 made provision for the bodies as well as for the minds of the school children within the bounds. As Dr. Ross (Chairman of the Trust) told the visitors, the Dunfermline Carnegie Trustees began their interest in physical training by providing on a humble scale for gymnastic exercises; then they extended the work to the teaching of physical culture in all their public schools; then they passed to medical inspection of all school children, and eventually were further led to the creation of a College of Hygiene and Physical Training, where students, after pursuing a suitable course of study, became qualified as teachers to communicate what they had gained by their studies to the children in the public schools throughout the country. Still further, medical inspection had led the way to its natural and indispensable sequel, medical treatment. In all these advances the Carnegie Trustees, with it can well be believed the full approbation of the truster, tried to act as pioneers, and their success can now be recognized. Further, the delegates not only heard of these things—they saw the training lessons for children of various ages going on, and witnessed an exhibition by the students of the College of Hygiene. The conference was notable for other things, however, as well as the visit to Dunfermline. Dr. Campbell Munro, the County Medical Officer for Renfrewshire, carried the sense of the gathering with him when he advocated simple and inexpensive buildings and condemned the palatial schools—costly solid stone structures—put up as if they were to last for ever. Inexpensive buildings, well heated of course, well lighted, and well ventilated, were what were needed; they would serve their day and could then be razed to the ground when new ideas perhaps demanded a different type of structure. Dr. Leslie Mackenzie touched upon another difficulty when he asked the conference how far they could, without danger to the boy or girl, require the industrial worker to remain at school. This was the medical problem of the continuation schools. Was it medically right to permit a boy or girl to work eight or nine hours a day, and then to require two or three hours of intellectual labour at an evening school? There were several other matters of no little moment discussed, such as the difficulties of the medical treatment of school children in the rural districts, on which Dr. Maxwell Ross spoke helpfully and suggestively. Touching upon the problem of the teeth, especially between the critical ages of 6 and 8, Dr. Maxwell Ross, we notice, recommended the appointment of a whole-time dentist for such a county as Dumfries. One of the most interesting events of the conference was the visit paid to one of its sessions by Sir John Struthers, K.C.B., Secretary to the Scottish Education Department. In an address he expressed what was probably in the minds of all the delegates, the thanks they owed to Dr. Leslie Mackenzie, to Dr. Cruickshank, and others for making the conference possible and for carrying it through so successfully. Very significant, too, was Sir John Struthers's remark that he was entirely with Dr. Campbell Munro in his desire for improvement and economy in the building of schools. Taking it altogether, this conference, the first of its kind held in Scotland, must have lasting effects. The school medical officer is a growing power in the land; and with the help of such conferences to enable him to see his subject "steadily and see it whole," and with such special training as can now be got from post-graduate courses on the diseases and defects of children, he ought to be a beneficent force likewise.

LONDON SCHOOL OF TROPICAL MEDICINE.

The extensions in progress at the London School of Tropical Medicine are approaching completion and will materially increase its resources. The new general laboratory, which is beautifully lighted from the north, will provide bench room for seventy-two students, or, indeed, more if necessary. Separate laboratory accommodation on a generous scale is also being provided for a suggested new department of tropical sanitation and for an insect room, a preparation room, and a director's room. All these are in addition to the existing helminthological, protozoological, and entomological laboratories. The residential accommodation has been extended, and now comprises twenty-seven bedrooms, while a new mess-room and serving-room are nearly completed. Suitable accommodation is being provided also for ladies, a considerable number of whom attend the classes. The necessity for this general increase in the workrooms and residential quarters is due to the gratifying growth in the number

attending the three sessions of the school which are held each year. Last year the total number attending the three classes was 194. The school draws its pupils from all parts of the British Empire and not a few from other countries. The visitor to the school cannot fail to be impressed by the way in which the institution is organized, and especially, perhaps, by the high standard already attained by the comparatively new special departments of helminthology, protozoology, and entomology. It is probable that the extension of the school will be opened with some ceremony during the summer, and in any case everything will be ready for the work of the next autumn session. The hospital is in immediate connexion with the school; both occupy a site close by the entrances to the largest docks on the Thames, and there are projects for adding to the docks at least one still larger. In the wards of the hospital may be seen, in the course of a month or two, seamen and others of almost every nationality suffering from those exotic diseases to the study of the prevention and treatment of which the whole institution is primarily devoted.

GRAND OLD MEN.

THIS is usually said to be the day of the young man, and in business at least the phrase "too old at forty" is supposed to express the truth. Undoubtedly, the pushful young man is very much to the fore, but in the higher spheres of activity where judgement and ripe experience are more valuable than adventurous energy, old men still do more than hold their own. The question of a retirement age for judges has recently been discussed, and Lord Alverstone is reported to have said that a judge is at his best from 65 to 80. Mr. Justice Phillimore, again, is reported to have delivered himself of the apparent paradox that the work he now does is so hard that if he was a younger man he could not do it. This, we take it, means that the larger experience he has gained with increasing years has made him more capable. But it is not only on the bench that we see octogenarians full of intellectual vigour, and there are among us several nonogenarians who are far, indeed, from the second childishness and mere oblivion of the last act of Jaques's drama of life Lord Wemyss at 94 still wields a slashing pen in the advocacy of his opinions, and Lord Strathcona at 92 continues active in public life. We are proud to claim as one of our grand old men of medicine the Right Hon. Sir Charles Tupper, now aged 91, who sailed from Canada for England on May 2nd. He is a Doctor of Medicine of Edinburgh, but is best known as a politician. He was Premier of the Province of Nova Scotia at the time of the Confederation in 1867, and has held nearly every great office of State in the Canadian Government. He was President of the Privy Council in 1872, Minister of Inland Revenue (1872–3), Minister of Customs (1873), Minister of Public Works (1878–9), and Minister of Railways and Canals (1879–84), High Commissioner for Canada in England (1883–7 and 1888–96), and Minister of Finance 1887–8). He was one of His Majesty's Plenipotentiaries on the Fishery Commission at Washington in 1887–8, and Commissioner for the negotiation of a treaty between Canada and France, 1893. He became Prime Minister of the Dominion of Canada in 1896 and was Leader of Opposition in the Canadian House of Commons from 1896 to 1900. He was created a baronet in 1888 and was named a Privy Councillor in 1909. Few men's lives have been so full of work useful to their country and to mankind as that of Sir Charles Tupper.

SIR JAMES PORTER.

SURGEON-GENERAL SIR JAMES PORTER, K.C.B., who retires from the office of Director-General of the Medical Department of the Royal Navy, which he has held for exactly five years, has had a very distinguished career since he entered the service as Surgeon in 1877 as the first man of his year. He served as Surgeon to H.M.S. *Orontes*, which was employed as a hospital ship during the Egyptian war of 1882, and received the medal and Khedive's star. From May, 1884, to May, 1885, he was Surgeon of the Royal Marine Battalion engaged in the defence of Suakim and in the operations in the Eastern Soudan. He took part in the action at Hashien, ToFrek, the attack on the convoy of Guards and Marines, and the taking and burning of Tamai; for these services he received the two clasps—Suakim, 1885, and ToFrek. In 1889 he was promoted Staff Surgeon, and in 1898 Fleet Surgeon. He served in the South African war from an early period. He was Senior Medical Officer of the Naval Brigade landed for the defence of Stormberg, and subsequently joined Lord Methuen's (the first) division of the army, taking part in the actions at Belmont, Graspan, with storming party of naval brigade, Modder River, and Magersfontein. He then joined the sixth division under General Kelly Kenny, and took part with it in the relief of Kimberley, including the action at Klip Drift, engagements at Paardeburg from start to finish, Poplar Grove, Dreifontein, and the entry into Blomfontein. Later he joined the eleventh division under General Pole-Carew, and served with it from Blomfontein to Belfast, being present at the following engagements during the advance: Vet River, Zand River, Johannesburg, Pretoria, Diamond Hill, and Belfast. Afterwards he joined the cavalry division under General French and proceeded with it to the capture of Barberton. He received the South African medal with eight clasps and was specially promoted to Deputy Inspector-General in 1900 for his South African war services. He received the military C.B. in June, 1902, and was promoted to Inspector-General, the rank now called Surgeon-General, in 1906. In addition to these war services he has held many appointments, having been in medical charge, among other establishments, of Gibraltar, Chatham, and Haslar Hospitals. His tenure of office as Director-General has been marked by the same administrative abilities as distinguished the other stages of his career, and his nomination to be K.C.B. in 1910 was felt to be a fitting recognition of his loyalty to the premier service and to his own department. Recently he was appointed Honorary Physician to the King. He will be succeeded by Surgeon-General Arthur William May, C.B., who entered the service in 1878 and served in the Egyptian war of 1882, the Suakim expedition of 1884, and with the Camel Corps of the Nile expedition for the relief of General Gordon. He acted as Deputy Director-General from 1905 to 1909, and was recently in charge of the Royal Naval Hospital, Chatham.

THE ROYAL SOCIETY CONVERSAZIONE.

THE Royal Society held its annual conversazione on May 7th at Burlington House. Owing to the celebration of the 250th anniversary of the foundation of the society last year, there was a considerable change then in the character of exhibits, but this year the demonstrations given were of the usual type, forming, as on previous occasions, for the most part, the usual synopsis of the year's advance in science. Naturally, this was shown most strikingly in the number of exhibits illustrating the new forms of apparatus, or new means of determining principles connected with the science of aeronautics. There was little in the exhibits having a direct bearing on medicine. An exception, however, must be made in the case of the demonstration by Mr. H. G. Plimmer of blood parasites that were either new to science or had been found in new hosts. The most remarkable of these, which were mounted with characteristic skill, were a new type of haemogregarine in the blood of a Bengal monitor, a trypanosome that had been found in the blood of a Malay parrakeet, though it had hitherto been

believed that there were no trypanosomes in that country, and the presence of *Spirochaeta pallida* in the lung of an embryo whose mother was infected. There were many exhibits bearing indirectly on medical science. The most remarkable of these, and one of the most interesting in the whole collection, was the collection of living crustacea from the neighbourhood of Plymouth shown by the Marine Biological Association of the United Kingdom. The principle of the arrangement was to illustrate the modification in living crabs and their allies. Among the specimens shown were good examples of the spider crab, which decks itself out with all sorts of foreign material and small "parasites," so as to make itself resemble its environment; of the hermit crab, which, not content with living in a shell that it has commandeered, joins forces with an anemone, the advantage gained being that whereas the crab is a favourite prey for fish, the anemone is avoided on account of its powers of stinging; and of the crustacean in which the female, after being parasitic on a fish, drops to the bottom of the ocean and converts the whole of its body material into eggs to carry on the race. Among the many exhibits was one of certain crabs that had come from a tropical port, sheltering themselves beneath the shell of the barnacles fastened on the ship's bottom; they were eventually discovered when the vessel was dry-docked in Plymouth. The Curator of Geology at the British Museum, Dr. A. Smith Woodward, showed the famous Piltdown skull of the species named *Eoanthropus dawsoni* and with it a number of plaster casts, some showing the exact remains as they were discovered, and others illustrating how it had been possible to reconstruct the skull of the species. It was perhaps unfortunate that this exhibit was not placed side by side with that shown by Professor Elliot Smith, who had a number of casts of the brain of the species and of other primitive brains in primitive man, anthropoid apes, and other mammals supposed to be near the line of human ancestors. The series illustrated the interpretation of the distinctive features of the most primitive human brain, and elucidated to some extent the nature of the evolutionary process by which the human brain has been derived from that of the early mammal. Professor E. B. Boulton showed a number of moths illustrating points in heredity, and Mr. L. Doncaster by a series of six generations of the moth *Abraxas grossulariata*, in which families consisting solely of females had appeared. Usually, the exhibit demonstrated, unisexual broods are the offspring of females which belonged to such broods; but not all such females have only female offspring, and in some cases unisexual broods had been produced by females of bisexual broods immediately descended from unisexual families. Professor Collie and Mr. H. F. Paterson gave a demonstration of the neon and helium they have found in hydrogen after the passage of the electrical discharge through the latter at low pressure. An ultra-condenser for the observation of ultramicroscopic particles, greatly simplifying the apparatus necessary for this class of work, was shown by Messrs. Leitz and Routh. In the evening special demonstrations were given on "The Motion of Viscous Fluids," by Mr. Leonard Bairstow, and on "The Discovery of a Paleolithic Skull and Mandible at Piltdown, Fletching, Sussex," by Dr. A. Smith Woodward.

THE RECENT ACTION AGAINST THE "PALL MALL GAZETTE."

A LETTER signed by 148 representatives of the medical profession and teachers of medical sciences has been sent to Mr. W. W. Astor, proprietor of the *Pall Mall Gazette*, congratulating him on the result of the recent libel action against that paper, and thanking him for the public service which he has rendered to the medical profession in this matter. The letter was in the following terms:

"We desire to congratulate you on the result of the action recently brought against the *Pall Mall Gazette*, and to thank you for the public service which you have rendered to our profession. You have enabled all men to understand more clearly the principles of our science and practice, the absolute necessity for research into the problems of disease, and the profound significance of the discoveries made during the past thirty years. You have spared neither time nor trouble nor money to bring home to the public the truth about experiments on animals in this country, and to expose the errors of antivivisection. We thank you, in the name of our profession, for the very important work which you have thus accomplished."

THE spring session of the General Medical Council will begin on Tuesday, May 27th, when the chair will be taken by the President, Sir Donald MacAlister, K.C.B., at 2 p.m.

The Presidency of the Section of Ophthalmology of the XVIIth International Congress of Medicine, which became vacant by the lamented death of Sir Henry Swanzy, has been accepted by Sir Anderson Critchett.

Medical Notes in Parliament.

[FROM OUR LOBBY CORRESPONDENT.]

Parliamentary Grant to Universities.—A considerable number of questions on this subject have been addressed to Mr. Pease, the President of the Board of Education, in connexion with questions relating to the administration and management of the University of Bristol. In one of his replies, Mr. Pease said that he was informed by the Advisory Committee, presided over by Sir William McCormick, that the educational work was efficiently carried on, and laid down the general principle by which he was guided in the allocation of parliamentary grants to universities as follows: "Power is given, through the Sovereign, to the President of the Council and the visitors to make inquiry if one is needed. But my duty is to see that the parliamentary grant is efficiently administered in connexion with education, and I am satisfied that the educational efficiency is satisfactory at the present time."

Milk Preservatives (Boron Trioxide).—Mr. Charles Bathurst asked the President of the Local Goverement Board whether, in the opinion of his expert advisers, the use of less than 0.20 per cent. of boron trioxide as a preservative in cream was injurious to the health of infants, pregnant women, and invalids; whether the new milk and cream regulations of his Department permitted its use for that purpose, and, if so, in what quantities. Mr. Burns said that there was no exact consensus of opinion as to the amount of boron trioxide which might be necessary to produce injurious effects in different persons. The regulations to which reference was made were not intended to control the amount of preservative which might be added, but only to secure that no preservative should be added to cream without declaration on the label as to the amount. The provisions of the Sale of Food and Drugs Act, 1875, were available for preventing the use of preservatives to an extent such as to render any article injurious to health.

Tuberculosis Order, 1913.—Mr. C. Bathurst asked the President of the Board of Agriculture whether, seeing that under the Dairy, Cowsheds, and Milkshops Order of 1885 compulsory veterinary inspection of cowsheds and notification of bovine tuberculous disease was now required by those district sanitary authorities only which had adopted that Order and would continue to be required by them until uniformity of action was secured as the result of the

passage into law of the Milk and Dairies Bill, and seeing that under the Tuberculosis Order of 1913 such inspection and notification would be optional throughout the greater part of the country, he would facilitate local procedure and secure simultaneous uniformity of tuberculosis administration, as contemplated in 1909, make the commencement of the operation of the Tuberculosis Order contemporaneous with that of the Milk and Dairies Bill. Mr. Runciman said he had considered the suggestion, but he saw no good reason for postponing the operation of the Tuberculosis Order.

Air Space in Cowsheds.—In reply to Mr. Charles Bathurst, Mr. Burns said that no decision had yet been arrived at in regard to the prescribing by Departmental Order the minimum cubic air space for cows beyond the 500 cub. ft. commonly accepted as sufficient. He added that in framing the regulations care would be taken to see that any requirements which were prescribed were reasonable and practicable.

Lind v. Saleeby and the "Pall Mall Gazette."—Sir J. D. Rees asked the Attorney-General if the attention of the Government had been directed to the case of Lind *v.* Saleeby and the *Pall Mall Gazette*, which had occupied a judge and jury sixteen days; what had been the cost to the State of this trial and how much would be recovered from the plaintiff, who herself occupied several entire days; and whether any means existed or would be devised by the Government to make it impossible to convert the Courts of Justice into theatres for the discussion of abstract issues and places of advertisement for the professors of particular scientific or other beliefs.—Sir Rufus Isaacs said he had seen the reports of the trial in the public press. No extra cost had been caused to the State by the trial. If the court had not been occupied with that action it would have been engaged in the trial of other cases. It was for the learned judge who presided at the trial to decide whether the opinions of professors were relevant to the issue and should be given in evidence.

Lead Poisoning in the Potteries.—In reply to Mr. Noel Buxton, Mr. McKenna said that the number of cases of lead poisoning in the Potteries reported up to date was twenty-six, of which four were fatal; the number for the corresponding period in 1912 was the same, five, however, being fatal. The new Regulations were only made on January 2nd last, and entailed a great deal of work, both on the occupiers and the Department, to give effect to the requirements. It was too early yet to look for any substantial change in the figures of lead poisoning.

School Medical Officers.—In reply to Mr. Leach, Mr. Pease stated that the latest complete figures were those given in the chief medical officer's report dated October, 1912, in which it was stated that the total number of medical officers in the School Medical Service in England and Wales was 943.

Sleeping Sickness Commission.—In reply to Dr. Chapple Mr. Harcourt said that the Commission of Inquiry appointed last autumn by the British South Africa Company, when it was found that a case of sleeping sickness had occurred south of the Zambesi, was constituted as follows: Dr. Fleming, the Medical Director; Mr. Carbutt, of the Native Department; Mr. Jack, the Government Entomologist; and Dr. Stohr, of the Northern Rhodesian Administration, who had been engaged in sleeping sickness work in North-Eastern Rhodesia.

Motor Ambulance Wagons: Petrol Duty.—In reply to Dr. Chapple, Mr. Lloyd George said that he was considering, in connexion with his forthcoming Revenue Bill, the question as to the possibility of exempting from duty the petrol required by ambulance wagons used in accident and sick transport work.

Housing of the Working Classes (Ireland) Act.—In reply to Mr. William O'Brien, Mr. Birrell said that from the information furnished by local authorities it would appear that the average weekly rent charged for houses erected since the passing of the Housing of the Working Classes (Ireland) Act, 1908, was 3s. 4d. Twenty-eight houses were let at rents under 2s. a week.

Housing of the Working Classes Bill.—At the meeting of Grand Committee last week, the bill introduced by Sir Randolph Baker, commonly known as the Boscawen Bill, was under consideration. The President of the Local Government Board announced his intention of refusing to bring in a resolution to make the necessary financial provision. On this announcement Mr. Long advised the promoters to withdraw the bill, and this was accordingly done, but the action of the President of the Local Government Board has evoked emphatic protests from members of the Conservative, Liberal, and Labour parties. In view of the attitude adopted by Mr. Burns, it is certain that very considerable pressure will be exercised on the Government to introduce alternative proposals of their own.

Treatment of School Children (Scotland) Bill.—A short bill has been presented by Mr. McKinnon Wood, the Secretary for Scotland, which consists of one operative clause, the effect of which is to give to the education authorities in Scotland the same powers and duties with reference to the provision of medical treatment for children attending schools within their districts as they have with reference to the provision of sufficient and proper food or clothing or necessary personal attention under the provisions of Section 6 of the Education (Scotland) Act, 1908.

Bill for the Abolition of Vivisection.—A bill has been introduced by Mr. Chancellor, supported by Mr. Black, Mr. Hodge, Sir John Rolleston, Mr. Parker, Mr. William Thorne, Mr. John Wilson, Mr. Tyson Wilson, Mr. Thomas, Colonel Lockwood, Mr. Keir Hardie, and Mr. Snowden, the effect of which would be to prohibit the performance on any live animal, with or without the use of anaesthetics, of any experiment or demonstration or inoculation of a nature to give pain or suffering, either directly or in its after-effects, for any pathological, surgical, or any scientific purpose, or for the acquirement of manipulative skill. Whether this bill is or is not a product of a recent case in the Court of Queen's Bench it is difficult to say, but it is fairly safe to suggest that it has not much chance of obtaining a second reading.

Infanticide Bill.—A bill has been introduced by Sir William Byles the object of which is to abolish sentence of death in cases of infanticide by mothers where the infant is under the age of 4 weeks. The sentence which the bill proposes to substitute is detention during His Majesty's pleasure.

Capital Punishment (Age of Liability) Bill.—Another bill has been introduced by Sir William Byles on a subject similar to the foregoing, the object of which is to abolish sentence of death where the criminal is under the age of 21 years. The sentence which the bill proposes to substitute is detention during His Majesty's pleasure. The present age of liability to capital punishment is 16, such liability having been abolished as regards "children" and "young persons" by the Children's Act, 1908.

Whitsuntide Recess.—The House adjourned on May 8th for the Whitsuntide recess. It will reassemble on May 27th, and on that day the Mental Deficiency Bill, the Elementary Education (Defective and Epileptic Children) Bill, and the Milk and Dairies Bill have been put down for a second reading.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

CONFERENCE OF SCOTTISH SCHOOL MEDICAL OFFICERS IN EDINBURGH.

THE medical event of the week in Edinburgh was the holding of a two days' conference (May 1st and 2nd) of Scottish school medical officers. At the first session Dr. Carstairs Douglas presided, and in his opening remarks referred to the state of things as it was in 1891–2 and as it is now; a great evolution had, he said, taken place, and it was to be remembered that school medical officers were not merely examining children, but were rendering a great service to their country. Dr. Leslie Mackenzie dealt with the social significance of medical inspection, and pointed out that ten years ago there was no medical inspector in the whole of Scotland or perhaps only one, whilst now there were 105 medical men engaged in the work; there were various departments, including the hygiene of the school, medical research, medical examination of teachers, recuperative residence schools, the tuberculosis school, and medical conditions in the continuation school. Dr. Campbell Munro contributed a paper on the hygiene of the school, in which he protested against palatial school buildings which would be antiquated long before they were worn out. Dr. Rose spoke upon school medical research, and emphasized the importance of the investigation of the colour sense and the practice of physical culture.

The second session took place in the afternoon of May 1st at Dunfermline, where the delegates were received by Dr. Ross, the chairman of the Carnegie Trust. Dr. Ross pointed out how Dunfermline had, by its College of Hygiene and Physical Training, led the way in physical culture and medical inspection of school children and its necessary consequence—medical treatment. A visit was paid to the Women's Institute, where an address was given by Dr. L. D. Cruickshank on the organization of physical education as an integral part of the work of the school medical service. He urged that a broad general system of constructive hygiene should form the basis of the entire work of the medical inspector; the child not the disease should become the main point of interest; there was need for the correlation of the work of the expert in physical culture and the medical officer. The delegates also saw typical physical training lessons for children of different ages in the institutions under the Carnegie Trust, as well as an exhibition by the students of the College of Hygiene in the Carnegie Gymnasium. Altogether the visit to Dunfermline was a most interesting part of the conference's work.

The second day the conference had a morning session, over which Dr. A. E. Scougal, formerly H.M. Chief Inspector of Schools for Scotland, presided, and at which Sir John Struthers, K.C.B., of the Education Department of Scotland, gave an address; in the course of it he expressed his personal strong belief in the importance and value of the system which had now been initiated, and his fervent hope for its further advancement. It was, he said, beginning to be realized that all educational theorizing was more or less futile unless it started from the physical basis. Where the medical officer was convinced that improvement in school premises was needed for the health of the scholars, and where the local authority was reluctant or recalcitrant, he strongly suggested communication with the inspector of schools in the district, who had very definite powers under the Code. Dr. Alister Mackenzie, Principal of the Dunfermline College of Hygiene and Physical Training, read a paper on the medical and physical examination of candidates for the physical training profession, dealing with the qualifications for women students only. The candidates underwent searching examination, and the attempt was made to select such as would be not only suitable physically, but who would surround their pupils with a good intellectual, aesthetic, and moral atmosphere. A paper by Dr. Darling, the medical officer of the Edinburgh Provincial Committee, on some typically difficult cases which come under the medical examination of candidates in the teaching profession, was read in his absence by Dr. Isabella Cameron, lecturer on hygiene to the Edinburgh Provincial Committee. Legal means and extreme persuasion should be used to compel attention to all remediable and arrestable morbid conditions. In some cases the medical officer should have power to recommend the granting of a temporary certificate.

At the afternoon session, which was presided over by Dr. James Ritchie, Medical Officer, Heriot's Hospital, Dr. J. Halley Meikle, Chief School Medical Officer, Edinburgh, read a paper on the medical treatment of school children in towns, in which he dealt with the management of such defects as blindness, deafness, epilepsy, and various maladies (tuberculosis, skin diseases), and of such other conditions as defective eyesight and teeth. Dr. Maxwell Ross (M.O., Dumfriesshire), considered the same matters as they called for attention in rural districts, specially emphasizing the dental problem, which he regarded as the most pressing. He favoured the plan of the appointment of a whole-time dentist for such a county as Dumfriesshire. A discussion of these papers brought the conference to a close, but not before Dr. Cruickshank (who along with Dr. Leslie Mackenzie had done so much to bring about the conference) had made the important suggestion that steps might be taken to hold a three weeks' course of physical training for medical officers in Edinburgh during the summer. The suggestion was favourably received.

COUNTY COUNCILS AND SANATORIUMS.

At the annual meeting of the Association of County Councils in Scotland on April 24th the question of the erection of sanatoriums and the treatment of tuberculous patients was considered. The committee expressed the view that Scottish county councils should proceed with the erection of sanatoriums in terms of Section 64 of the National Insurance Act for all areas for which such institutions had not already been provided.

The Chairman (Sir Charles Bine Renshaw) said it was very important that county councils should act on parallel lines in regard to sanatoriums, and suggested that the Secretary for Scotland should be asked to introduce a short bill providing that the borrowing powers which the county councils enjoyed under the Local Government Acts were, to the extent necessary, available for the purpose of providing sanatoriums.

This suggestion was unanimously adopted, and the Chairman said that a condition precedent to any action by the county authorities should be that the cost of treatment of insured persons should be borne by the Government. In Renfrewshire there was a deficiency of £600. The treatment of defendants and others was also important. Mr. Shaw, County Clerk, Ayr, said that in Ayrshire the Insurance Committee had adopted a resolution to meet the expenditure upon uninsured dependants, and had submitted through the National Insurance Commissioners an estimate of the deficiency, which amounted to £11,600, which included the treatment of tuberculosis other than phthisis. The general situation was serious. If the Insurance Committee, which did not represent the ratepayers, could call upon the County Council, which did represent the ratepayers, for a large sum of money, it was time the county councils had a larger representation on these committees.

After discussion it was agreed that county councils should undertake the erection of sanatoriums, that the association should make a representation to the Treasury with regard to the cost of providing sanatoriums for insured persons, and that no discrimination should be made between those counties which had and those which had not already provided sanatoriums.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

TUBERCULOSIS SCHEME FOR BELFAST.

THE Belfast Public Health Committee has, after considerable discussion and deliberation, formulated a tuberculosis scheme, which will be laid before the City Council and the Local Government Board. The scheme is comprehensive and includes both the insured and the uninsured. The total cost is estimated to amount to over £42,000 a year. To meet this liability about £8,000 is

expected from insured contributions and half of the balance will be paid by the Exchequer. The Abbey Sanatorium, which at present costs the ratepayers already £12,000 per annum, is to be taken over from the Poor Law Guardians, so that no further taxation will be required to meet that item. The Corporation already pays to the Forster Green Sanatorium some £3,000 a year, so that, unless things are managed on a much more expensive scale, only an extra £1,000 a year or so will be required, and a clear sum of £42,000 a year will be available for use in the prevention and treatment of consumption.

There will be two branches of work—the sanatorium and the dispensary. Several dispensaries may be required. The Abbey Sanatorium will be enlarged by the addition of 100 beds. Belfast's share of the £140,000 to be provided by Government for buildings will be £10,000 or more.

Operations in Workhouse Hospitals.

Among the reports received at a recent meeting of the Lurgan Board of Guardians was one which this board requests the medical officer of its workhouse, Dr. J. S. Darling, to make annually on the surgical operations performed therein. It was published in the local papers in a subsequent account of the meeting, and is worth attention as an indication of the wide field covered by the work of a medical man in this position, and of the amount of skill which he must possess for its successful performance. The operations performed during the year totalled 274, and included 35 appendicectomies, with 1 death; 7 gastro-enterostomies, with 1 death; 3 excisions of the rectum; 10 operations for repair of ruptured perineum; 5 prostatectomies, with 1 death; 5 cases of strangulated hernia, with 2 deaths; 17 cases of radical cure of hernia; 14 operations on malignant growths, with 1 death; 4 ventrifixations of the uterus, 11 plastic operations, and 8 major amputations. Taken together, the 274 operations cover fairly well the whole field of modern surgery, and give a total mortality-rate of only 4.3 per cent. This would seem to be a very satisfactory figure, especially when it is borne in mind that the conditions for operative work—though through Dr. Darling's efforts they have been greatly improved, and as may be seen provide some of the essentials for success—can hardly be as ideal as those at the great hospitals in large centres, and that there must be little opportunity for the selection of cases. In the fever block of the same workhouse, there were over 369 cases, with 12 deaths, these including 7 deaths from scarlet fever on a total of 240 cases, and 3 from diphtheria on a total of 33. Dr. Darling in his report gracefully expresses his indebtedness to Dr. Pedlow, Dr. Laird, and his other colleagues for assistance rendered to him in his work.

The Mental Deficiency Bill.

A special meeting of the Joint Committee of Management of the Richmond District Lunatic Asylum was held last week for the purpose of considering the provisions of the Mental Deficiency Bill now before Parliament, and whether it would be advisable to make application that the Act should apply to Ireland.

The Resident Medical Superintendent stated that the Royal Commission had reported that of the feeble-minded in Ireland 66 per cent. were urgently in need of attention; in England 44 per cent. and in Scotland 34 per cent. were similarly circumstanced. Ireland had no institutions open to the poorer class defectives, while across the water private charity had done a good deal to help these pitiable outcasts of society—in fact, about 25 per cent. were already provided for. From the ratepayers' point of view the Act should be distinctly beneficial, as it contemplated a contribution of as much as half the cost of maintenance, thus to some degree making good the deficiency from the local taxation account. A deputation from the Medico-Psychological Association had waited upon the Chief Secretary, who had expressed his willingness to draft an amendment extending the Act to Ireland, and that if the Irish members approved it would go through. Resolutions in favour of its extension to Ireland had been passed by the Irish Workhouse Reform Association, Philanthropic Reform Association, the State Medicine Section of the Royal Academy of Medicine, the Medico-Psychological Association, and the Committees of the Down District and several other asylums. The following resolution was proposed and seconded:

> That in the opinion of the Joint Committee of Management the Mental Deficiency Bill now before Parliament should be extended to Ireland, and that we request the Irish representatives to see that the provisions of the Act are extended to Ireland, and that proper safeguards are inserted in the bill with reference to an adequate Treasury grant in aid of the rates.

The motion was opposed on the ground that one of the first things to be undertaken by the new Irish Parliament would be the reform of the whole system of charitable relief, and that the extension of this Act to Ireland would be only a patching up of the present system, and that it would be better to see how the Act worked in England before adding a further burden to the ratepayers. On a poll the motion was lost, 5 voting for and 7 against.

Severe Epidemic of Measles.

A serious epidemic of measles prevails in Wexford, and it is estimated that at the present moment there are 250 cases in the town. During the past seven weeks an average of about twelve young children have died per week from pneumonia or bronchitis supervening on measles.

England and Wales.

[FROM OUR SPECIAL CORRESPONDENTS.]

LEEDS.

Retirement of Mr. Littlewood.

To the great regret of every class in Leeds, and in a very special degree to the regret of his colleagues on the staff of the infirmary, Mr. Littlewood has decided, not only to resign his position as Senior Surgeon to the infirmary, but to retire from practice and to leave Leeds. Mr. Littlewood, who was educated at University College, London, was appointed Resident Surgical Officer to the General Infirmary at Leeds in 1886. This position he held for about four years, and shortly after he ceased residence he was appointed to the assistant staff, on which he served for six years, when he was promoted to the full staff. During the earlier years of his teaching he acted as honorary demonstrator of surgical pathology at the School of Medicine, was afterwards lecturer on practical and operative surgery, and then succeeded Mr. Edward Ward as professor of surgery, from which position he retired in 1909. Mr. Littlewood held many other honorary appointments, but it is, of course, as a teacher, both at the medical school and at the infirmary, as a distinguished member of the staff, and as a deservedly popular consulting surgeon, that he will longest be held in remembrance. It would, indeed, be difficult to over-estimate the value of the work which Mr. Littlewood has done for the welfare of the university and the infirmary. His teaching has always been of the highest order, and he always seemed to succeed in getting the best work out of those who were privileged to work under him. At a meeting of the weekly board of the infirmary the following resolution was passed:

> That the Board of the General Infirmary desire to record their deep regret at Mr. Littlewood's resignation and their appreciation of the great services which he has rendered to the patients and to surgery.
>
> During his whole connexion with the infirmary, and particularly during his twenty-three years' service as assistant surgeon and surgeon, he has gained the confidence of his profession and extended the fame of the institution.
>
> The Board wish him much enjoyment in his well-earned leisure.

Every one who knows Mr. Littlewood will cordially join with the board in the good wishes which they express for his happiness in his retirement; Mr. Littlewood has been a most strenuous worker, and many will fully understand his desire to return to his native county of Norfolk while still in the zenith of his fame as a surgeon.

MANCHESTER AND DISTRICT.

THE MANCHESTER ROYAL INFIRMARY.

AT a meeting of the board of management of the Manchester Royal Infirmary, held last week, it was announced that Dr. A. T. Wilkinson had intimated his intention to resign his position as Honorary Physician to the infirmary from May 24th. Dr. Wilkinson has been a member of the staff for upwards of thirty-three years—twelve years as a member of the resident and non-resident junior staff, and twenty-one years as a member of the honorary staff. The board passed a resolution expressing regret that the time had arrived for his retirement from the active work at the infirmary, and its high appreciation of the services he had rendered to the institution. It is understood that retirement from the work at the infirmary does not involve retirement from private work as a consulting physician. The board further decided to appoint Dr. Wilkinson Honorary Consulting Physician to the Infirmary from the date of his retirement. Dr. E. N. Cunliffe, who is now Senior Honorary Assistant Physician, succeeds to the vacancy caused by Dr. Wilkinson's retirement.

LONDON.

METROPOLITAN ASYLUMS BOARD.

Appointment of Research Pathologist.

DR. WILLIAM MAIR, M.A., B.Sc., M.D., Ch.B.Edin., and D.P.H.Camb., for seven years Lecturer in Pathology at the Manchester University, and Pathologist to the Manchester Children's Hospital and the Salford Royal Hospital, has been appointed research pathologist to the Metropolitan Asylums Board.

Recognition of Medical Services.

The Asylums Committee reported that in view of the greatly altered conditions at the Darenth Industrial Colony it had had under consideration the salary of the medical superintendent, Dr. Rotherham, who had been in receipt since 1908 of his maximum remuneration of £800 with emoluments. The changes in administration had involved the removal from Darenth of the unimprovable imbeciles, who merely required housing, and the aggregation there, in two separate sections, first of the highest grade, or improvable imbeciles, and, secondly, of the non-certified feeble-minded. The Committee quoted favourable reports upon the institution by the Lunacy Commissioners, and said that the work which had elicited so many commendations had been carried out under Dr. Rotherham's personal direction and supervision. The Board approved a proposal which would have the effect of increasing the salary of the medical superintendent by about £40 per annum.

The Board also approved the increase of the salary of Dr. W. T. Gordon Pugh, Medical Superintendent of Queen Mary's Hospital for Children, from £600 with emoluments, to the maximum of £700 in one increment. The committee in this case noted that the development and organization of the work of the hospital, the introduction of many up-to-date forms of treatment, and the widespread reputation the hospital had gained in the eyes of visiting deputations from all parts, were attributable to the great initiative and resource of the medical superintendent. Side by side with this, due regard had been paid to economical management, and the Finance Committee had noted the comparatively low cost.

LONDON COUNTY COUNCIL.

The London County Council at its meeting this week received a report from the Public Health Committee advising that, in order to allow a comprehensive scheme for the treatment of tuberculosis in London to be evolved, and in view of the fact that the Council has hitherto not been an authority providing treatment for tuberculous patients, and that the Metropolitan Asylums Board has available the machinery necessary for the provision of residential treatment, the Board should be enabled to become an authority providing institutions for residential treatment for tuberculous persons of all classes. After some discussion, the Council instructed its Parliamentary Committee to take the necessary steps to place the Metropolitan Asylums Board in a position to form an active unit in any scheme that may be framed by the Council for the treatment of tuberculosis. It will be observed that the Local Government Board has already notified its intention to recognize the London County Council as the central organization for the provision of institutional treatment.

NEWCASTLE-UPON-TYNE.

BANQUET AND PRESENTATIONS TO PROFESSOR DRUMMOND AND PROFESSOR SIR THOMAS OLIVER.

ON May 6th, in view of their retirement as honorary physicians from the Royal Victoria Infirmary, Professor Drummond and Sir Thomas Oliver were entertained to dinner by the past and present students of the University of Durham College of Medicine, and were made the recipients of very handsome presents in silver. Old students came from a considerable distance to do honour to the guests of the evening, and altogether about 100 were present. The occasion will be memorable in the history of the infirmary in so far as two of its best known men have retired from the active staff. Their retirement is a loss to the infirmary and to the clinical teaching of the university. Mr. H. B. Angus, Professor of Surgery in the College of Medicine, and one of the surgeons of the Royal Victoria Infirmary, occupied the chair. To Dr. Nathan Raw was entrusted the task of making the presentation to Professor Drummond and of proposing his health. In a manner and in language appropriate to the occasion he discharged the task uncommonly well. As one of his old house-physicians, Dr. Raw could speak from experience of the ability of Dr. Drummond as a physician, of the interest he took in the students generally, and of the value of his contributions to the study of diseases of the nervous system. Equally happy, but with evidence of a feeling of regret at his severance from an institution with which he had been connected for thirty-five years, was Dr. Drummond in his reply. A note of sadness ran through the earlier part of his speech, and he was speaking to an audience which was in sympathy with him. When he passed to the story of his early years spent in Trinity College, Dublin, and spoke of his association as house-physician with Sir William Stokes, he warmed to a subject which riveted the attention of those assembled, and drew forth expressions of their appreciation. In a peroration at once graceful and dignified, he thanked the past and present students for the handsome silver tray and salver which had been presented to him.

Professor Beattie, in submitting the health of Sir Thomas Oliver, and in presenting to him a silver tray, salver, and centre piece, spoke of the lengthened service which he had rendered to the infirmary, and of the successful part he had played in the clinical instruction given there. He also dwelt on the work which Sir Thomas has done in the field of industrial diseases, and reminded his hearers that long before the Gulstonian Lectures on Lead Poisoning were delivered he, as one of his old students, had listened to clinical lectures on occupational disease by the guest whose health he had the honour of proposing. Sir Thomas Oliver, in accepting the gifts, after thanking Dr. Beattie for the compliments paid him, said that the mirror was held up to their gaze as well as to his own, and that on it was reflected the word *failure* in bolder letters than the word *success*. No man's life could be regarded as a success, for it was a question whether man's work was ever accomplished, since fulfilment could never transcend aspiration. Becoming reminiscent of his early association with the infirmary, he drew a picture of the great changes which had taken place in administration and progress. Listerism had just come into being when he joined the infirmary staff. Its adoption generally had changed the whole practice of medicine and surgery. Sir Thomas Oliver sounded no note of sadness on his retirement from the active staff of the infirmary, but said he looked forward to carrying on investigations which were waiting for him.

In a happy speech intermingled with anecdote Professor Stuart M'Donald proposed "Past and Present Students," which was acknowledged by Professor Bolam and by Mr. J. M. Pirrie.

The toast of "The University of Durham" was given by Dr. William Martin in an excellent speech, and responded to by the Vice-Chancellor of the University, Professor Sir George Hare Philipson. Dr. Parker submitted the health of the Chairman, and spoke of the interest Mr. Angus always took in sport and in all that concerned the welfare of the student.

During the dinner music was rendered by Mr. Robert Smith's band, and later on the harmony of the evening was much enlivened by the songs given by Dr. Abraham and Mr. Nattrass. It is seldom that such a successful medical gathering has taken place in Newcastle. Much of the success of it was due to the honorary secretaries, Messrs. C. S. Woodman and F. J. Nattrass.

Australasia.

Consumptive Immigrants.

Attention has been drawn to the fact that there is a relatively large proportion of cases of tuberculosis among the immigrants who have come out to New South Wales from the Old Country during the last few years. Dr. Richard Arthur, M.L.A., the President of the Immigration League, has on several occasions called attention to this matter both in the press and in Parliament, and some months ago he wrote to the leading London journals pointing out the cruelty of persons in England sending out their relatives who were suffering from advanced phthisis. The vice-president of the National Association for the Prevention of Consumption, who is also one of the physicians to the Tuberculosis Dispensary, states that he has lately come across several cases in the last stages of consumption among immigrants who have only recently arrived from the Old Country. While it is impossible at present to state the actual increase in the number of these cases, the Commonwealth statistics for 1910 give some idea of the number of advanced consumptives who came into the Commonwealth during the previous few years. In that year exactly 100 consumptives died who had been in Australia four years or less, while 43 died who had been in the country from five to ten years. Of these, 29 had been in Australia less than twelve months, while 27 had been there for one year, 21 a couple of years, 16 three years, and 13 four years. Increased care in the future is to be exercised in the selection of assisted immigrants. It is, of course, recognized that the dry and warm atmosphere of some parts of Australia is especially good for cases of early pulmonary tuberculosis, but the profession in England should be particularly careful in advising consumptive patients to come to Australia unless they have independent means.

The late Sir James Graham of Sydney.

Sir James Graham, M.A., M.D.Edin., died in Sydney on March 8th in his 56th year. He went out to New South Wales in 1880, and was appointed superintendent of Royal Prince Alfred Hospital. In 1889 he was elected assistant physician to the hospital, and on the death of the late Dr. Chambers was appointed lecturer in obstetrics in the University of Sydney, a position which he held till the time of his death. He was awarded the gold medal for his thesis on hydatid disease in Australia presented for the degree of M.D. at the University of Edinburgh. He founded the Surgical Appliance Aid Society, and was a Director of both the Sydney and Royal Prince Alfred Hospitals. In 1893 he was elected an alderman of the City of Sydney, and was the leader of the Municipal Reform party. He was president of the Citizens' Vigilance Committee when the first epidemic of bubonic plague occurred in Sydney. He was elected Mayor of Sydney in 1901, the year in which King George V, then Duke of York, visited Australia, and this was the occasion of his receiving the honour of knighthood. For several years he was a prominent figure in politics. He was elected a member of the Legislative Assembly for Belmore in 1894, and represented that constituency for six years. He was Vice-President of the Liberal Association and was a strong supporter of the Liberal party. In 1890 he married Miss Millard, who was at that time a nurse at the Prince Alfred Hospital. He is survived by his widow and one son, who is at present a medical student at the Sydney Medical School. The funeral service was held at St. James's Church, King Street, Sydney, and was attended by a large and representative gathering, and the interment took place at Waverley Cemetery.

A Campaign against Syphilis in Victoria.

When the Australasian Medical Congress met in 1908 the following resolution was carried after prolonged discussion:

> That syphilis is responsible for an enormous amount of damage to mankind, and that preventive and remedial measures directed against it are worthy of the utmost consideration.

The congress took place in Melbourne and public interest being aroused by the resolution, a deputation of the clergy waited on the Premier of Victoria and asked that some action should be taken. The Victorian Government later consulted its medical officer, Dr. Barnett Ham, who advised that a comprehensive inquiry into the extent of the prevalence of venereal disease should be made by utilizing the Wassermann blood test. The details of the inquiry were arranged by Dr. Ham with the assistance of an advisory committee of medical practitioners, and of what followed an account is given in the April number of *Bedrock*, by Dr. James W. Barrett, C.M.G. For twelve months syphilis was made a compulsory notifiable disease within a radius of ten miles from the General Post Office, Melbourne. No names were given, but the age, sex, and clinical conditions were to be accompanied by a specimen of blood which was submitted to the Wassermann test, a special staff being employed for the work. The profession, on the whole, responded well to the appeal, although Dr. Barrett thinks that probably only a small proportion of cases were caught in the net. At the end of the year about 5,500 cases had been reported and tested. Of these, 3,167 — or the equivalent of 0.5 per cent. of the population — were definitely proved to be syphilitic. Simultaneously two other lines of investigation were followed up. At the Victorian Eye and Ear Hospital, during a period of four months, 550 patients were submitted to the Wassermann test, without regard to the condition which had caused them to visit the hospital. Of the eye cases 13 per cent. were found to be syphilitic, and of the ear and throat cases 15.8, giving a total percentage for all the 550 of 13.3 per cent. At the same time, at the Children's Hospital, a pathologist examined the tissues of those who showed signs of syphilis, whilst the blood was independently examined, the results going to confirm the observations already cited. In addition, a little later on, the staff of the Women's Hospital informed the Government that, in their opinion, half of their operative work was due to gonorrhoea, that much sterility was due to that cause, and that if an attempt were to be made to suppress one venereal disease, it would be better in the public interest to deal with all such diseases. Finally, this first committee presented a report, which was handed by the Government to the daily press for publication, with the object of convincing the public that action for the suppression of venereal diseases was imperative.

The Victorian Government next appointed, under the presidency of Dr. Ham, a permanent advisory committee of medical men and women, which at once made it known that whilst its members would informally support any moral campaign, its business in a corporate capacity was to teach people how to prevent infection, and to render those infected no longer dangerous to others. This was to be done by open educational means. The aid of influential ladies was then sought, and the National Council of Women was informally approached. This council convened a meeting of its members, and after hearing statements of fact from medical women passed a resolution offering to co-operate with the Government in any reasonable steps which might be taken to diminish suffering, though it would oppose the passage of a Contagious Diseases Act unless it applied to men as well as to women.

The passage of no such Act, however, was really contemplated, for the committee itself considered that the problem could be better attacked by other means. Newspapers were asked to publish official and unexpurgated accounts of the steps taken, to call these diseases by their proper names, and in general to abandon the ostrich-like attitude usually adopted in regard to them. This request was agreed to, and such reports have since been regularly published.

The Victorian Government then decided to equip a ward in the Alfred Hospital and the Women's Hospital, at Melbourne, for the treatment of persons of any class suffering from venereal diseases, except prostitutes, for whom other arrangements exist, and the profession was asked to send such cases for indoor treatment. These wards are specially staffed, and the Government defrays the cost of maintenance. The object of this measure was to prevent further infection and to give opportunities for advice to the patients. The Government has further arranged with the University of Melbourne for the free application of the Wassermann test to 2,000 hospital cases a year, and to all other cases at a low rate of payment. Lastly, it is proposed to introduce a modification of an Act which is in force in a sister State of the Australian Commonwealth, so as to provide that any person sentenced to a term of imprisonment for any cause can, if found to be suffering from contagious venereal disease, be detained until he can be released without risk to others.

The campaign against venereal diseases in Victoria is, therefore, founded on the rational basis of a comprehensive investigation as to the extent of their distribution, followed up, when this has been ascertained, by a combined attack on medical lines. In this work Dr. Barrett says the clergy have been of great service. They have had the facts placed fairly before them and have opened their pulpits to medical men who are prepared to state the facts in a temperate manner. Dr. Barrett thinks the elimination of venereal disease by such measures quite possible, and if the problem is faced straightforwardly, not very difficult. It will be interesting to watch the results of the experiment which every lover of his kind must fervently hope will be successful.

British Guiana.

THE report of the Surgeon-General, Dr. Godfrey, for the year ending March 31st, 1912, has recently been issued.

Hospitals and Asylums.

The Public Hospital, George Town, has accommodation for 291 males and 245 females; 11,149 patients were admitted during the year, and there were 496 patients in hospital on April 1st, 1911. The number of out-patients treated was 44,958, being an increase of 3,050 on the previous year. There were 1,265 deaths; this gives a death-rate of 10.8 per cent. of the total number treated. The deaths amongst children under 5 years of age were 235, or 18.5 per cent. of the total deaths; this percentage is high, and is to a large extent due to malnutrition consequent on improper feeding. The gross cost (medical attendance excepted) was 50.17 cents, and the net cost 43.8 cents a head a day. In the Public Hospital at New Amsterdam 3,867 patients were treated and 27,372 out-patients, with a death-rate of 10.2 per cent. on the cases treated. In the three other hospitals in the colony 2,277 in-patients and 4,609 out-patients were treated. There were 469 male and 299 female lunatics under care in 1911, and 75 males and 56 females were admitted. In the Leper Asylum there were 306 males and 134 females; the percentage of mortality on the total number of inmates was 13.

Public Health.

Glycerinated lymph is imported for the use of the public vaccinators, to whom it is supplied free of charge; 1,284 successful vaccinations were performed during the year.

The colony was free from plague, yellow fever, and small-pox.

The death-rate of the colony was 31.7 per 1,000 as against 34.4 per 1,000 for the previous year; the birth-rate was 28.8 per 1,000 as against 27.5 for the previous year. Pneumonia still claims a large number of victims. At the Public Hospital, George Town, 388 cases were treated with a death-rate of 32.2 per cent. There was also a large increase in the number of cases of enteric fever treated at the Public Hospital—108 cases with 37 deaths, against 60 cases with 19 deaths for the previous year. The mortality amongst children under 1 year was 235 per 1,000 in 1910 and 229 per 1,000 in 1911. The mean rate for the past five years was 223 per 1,000. Tuberculosis was the cause of 7.3 per cent. of the total mortality of the colony; in the previous year the rate was 6.8 per cent.

The number of cases of malarial fever treated in the city hospitals shows a slight decrease. In 1906–07 it was 33,748, in 1910–11 they had fallen to 21,063, while the number of cases in 1911–12 had fallen to 15,169. The decrease is attributed to the antimalarial measures which have been adopted on the estates, consisting of the abolition of mosquito breeding grounds, including the screening of tanks, baths, and other receptacles for storing drinking water, removal from the yards of old tins, bottles, etc.; and keeping the drains and trenches clean and free of grass, so as to allow small fish to get at the mosquito larvae. Quinine was distributed free to the resident labourers, and especially to the children.

Ankylostomiasis.

In connexion with this disease preventive measures which have for some time been advocated by the department have been continued on the different sugar estates. These measures consist of (1) the erection of latrines; (2) the systematic examination of all newly arrived emigrants, and of all persons suffering from anaemia or who show the least sign of being infected with the parasite; (3) the treatment and constant observation of all known infected cases. The introduction every year of a large number of infected East Indian immigrants is a serious factor in preventing not only much better results but the eradication of the disease.

Bacteriological Department.

In connexion with the Government bacteriological department much important work was done during the year. Over 5,000 specimens were dealt with, and various reports were issued by the bacteriologists. The bacteriologists completed their investigations of the use of nastin in leprosy. Their conclusions were as follows: (1) That nastin has apparently very little beneficial effect on cases of leprosy; (2) a solution of benzol chloride in oil shows a higher percentage of improvement than nastin; (3) anaesthetic cases of leprosy run a definite course, after which the disease seems to die out, leaving the patient no longer infected.

Special Correspondence.

BERLIN.

Noguchi's Observations on Treponema Pallidum in the Brain in General Paralysis.—The Functions of the Cerebellum.—Cerebral Surgery.—The Results of Nephrectomy.—Communication of Syphilis to Rabbits.—A Diphtherial Vaccine.

THE hypothesis that general paralysis of the insane, tabes, and allied affections of the central nervous system are parasyphilitic or metasyphilitic in their relation to the original infection has been rudely shaken by Noguchi's latest researches.[1] This renowned investigator recently sent to Ehrlich in Frankfort, and to Hoffmann—the lamented Schaudinn's co-worker at Bonn— some sections of the brain from cases of general paralysis stained by a modification of the Levaditi method. The spirochaete of syphilis is present in every section, and both Ehrlich and Hoffmann have testified to their conviction by demonstrating the specimens on the same evening at their

[1] BRITISH MEDICAL JOURNAL, March 1st, 1913, p. 464.

respective medical societies. The organisms were more numerous in the cortex cerebri than in the medulla, and the nerve cells infected by them presented obvious signs of degeneration. Noguchi stated that he had been successful in finding the spirochaete in 14 out of 71 cases of general paralysis of the insane—that is, in 20 per cent. of all examined. As a result of his findings he has suggested that the disease is a lues cerebri; but Hoffmann, in the absence of any histological evidence to this effect, said that he was unable to accept this view, although he fully acknowledges the great importance of the discovery, which was bound to modify present views on the nature of a whole series of hitherto so-called parasyphilitic affections. At the close of his demonstration at Frankfurt Professor Ehrlich brought forward the following interesting theory to explain the frequent and well-known occurrence of lucid intervals in the course of the disease: When the spirochaetes in the brain have reached a certain number an antibody is produced which fixes the majority of them, and thus produces an intermission of the symptoms. A relapse would follow as soon as the organisms that had escaped fixation had reproduced themselves in sufficient number. On similar lines the fact that only 20 per cent. of Noguchi's cases yielded a positive result might, he thought, be explained, for the examination probably took place at a time when the majority of the spirochaetes had been destroyed. It must, however, be admitted that the comparative inefficiency of all therapeutic measures in this dark chapter in the history of the disease had been rendered even still more difficult of explanation by this discovery. Ehrlich believed that, although it was very doubtful if it were possible to eradicate the spirochaete completely from the brain in these cases, energetic administrations of a combination of arsenical compounds should at least be attempted, and would offer the best chance of success. Hoffmann took the same view, and urged resort to such measures, especially in early cases. Their opinions, however, are not shared by Westphal (Bonn), who, writing in the *Berliner klinische Wochenschrift* after the Ehrlich-Hoffmann demonstrations, and in reply to their statements, gave a warning that for the present we are still bound to the old symptomatic treatment, and rather resignedly bade us beware of too much optimism in our immediate therapeutic outlook.

At a joint sitting in Berlin of the Surgical Society, the Society for Internal Medicine and Pediatrics, the Otological and the Neurological Societies, an important discussion was held on the functions of the cerebellum. The anatomy and physiology of the subject were respectively represented by Professors Edinger of Frankfurt and Bárányi of Vienna, whose recent work on the relations of the vestibular apparatus to cerebellar function and localization in the cerebellar cortex has given rise to so much interest amongst neurologists. Dr. Rothmann, a member of the Berlin Physiological Society, read a paper in which, after referring to the recent cerebellar experiments on dogs, he stated that he had established the presence of special centres in the cerebellar hemispheres for certain attitudes of the fore and hind extremities respectively. Stimulated by Bárányi's work he had been able to demonstrate the existence of other centres in those, for the alteration of both fore and hind leg postures. Whilst single extremities were separately represented in the cortex of the cerebellar hemispheres, it was important to note that ablation experiments on the median lobe—the so-called vermis cerebelli—constantly produced co-ordinated disturbances of the trunk and extremities, disturbances of Edinger's "statotonus," a name devised by him to express the muscular and articular co-ordination (controlled through the labyrinth) which makes walking and standing possible. The functional importance of the cerebellum was further emphasized by the case of a woman aged 30, presented conjointly by Oppenheim and Krause. The former had diagnosed a tumour of the left cerebellar hemisphere, and Krause had operated and removed it from its place of origin in the roof of the fourth ventricle, whence it had grown upwards between the vermis and the left cerebellar hemisphere. It proved to be a lymphangio-sarcoma, and the interest and importance of the case lay in the fact that its ablation necessitated the removal of the roof, and the complete exposure of the floor of the fourth ventricle with its vital cardiac, respiratory, and vasomotor centres. The patient had completely recovered, and during her convalescence and in the two years which have passed since the operation had presented no symptoms assignable to disturbances of any of these centres. The result is a veritable triumph of surgery, and disposes once and for all of the old conception that surgical interference in the neighbourhood of the fourth ventricle can hardly be countenanced.

At the annual Surgical Congress, held shortly after Easter in Berlin, a discussion on cerebral surgery was opened by Professor Eiselsberg, of Vienna, whose statistical results on 162 operated cases are of great interest. Of these, 69 had been diagnosed as cerebral tumours; 20 cases were trephined without discovering anything, and 7 cases subsequently died. The cerebral tumours were removed in 40 cases with a direct mortality of 9; of these deaths, 4 were due to meningitis, 3 to shock, and 1 to pneumonia. In 9 of the remaining 31 cases there was a recurrence with fatal termination in the course of a few months. Of the 22 remaining cases, 6 were improved by the operation, 3 remained *in statu quo*, and 9 were cured. He was able to publish better results from his operations on 16 cases of tumour of the hypophysis cerebri. There were 4 deaths and 12 cures or improvements. Of 33 cerebellar cases, 9 died after the first operation, and the tumour was found in only 8 cases. Among 17 cases of tumours in the acusticus region there were 10 deaths, which suggested thereby that this localization has the worst prognosis. Kütner of Breslau presented his results on 92 cases. The immediate mortality of the operations worked out at 30.5 per cent., and he gave the same percentage of successful results, a percentage which in the case of his private patients rises to 55 per cent., owing, probably, to earlier interference. The surgery of the spinal cord as reported from the Eiselsberg clinic showed a mortality of 30 out of 40 cases operated upon. Oppenheim called attention to the fact that in late years the prognosis of operations for the relief of cerebral tumours appeared to have become less favourable. He was of opinion that the indications for intervention had become too broad, and urged that in cases in which the diagnosis was at all uncertain surgical intervention should be withheld, as spontaneous cure or alleviation occasionally took place.

The result of nephrectomy was another subject discussed at this congress. It was introduced by Kümmell of Hamburg, who published the after-history of 386 cases. There was complete cure in 80 per cent. of the tuberculous cases, in 40 per cent. of the malignant tumours, 90 per cent. of the cases of pyonephrosis, and in 98 per cent. of those of hydronephrosis. The prognosis was excellent in unilateral traumatic cases, but it was the reverse for cases of nephritis. A great many nephrectomized patients died within the first year. Pregnancy and parturition did not seem to be attended by special risk in such individuals. In 17 such cases there was 1 of nephritis and 1 of miscarriage. The Berlin University clinic reported the results of 100 nephrectomies. Of these 9 died as a direct sequel to the operation, and 28 of intercurrent disease, and 60 are still living. Among 18 cases of malignant disease of the kidney there was no successful case; all had since died from recurrence or metastatic deposits.

A report of some recent experiments by Uhlenhuth and Mulzer on the infectivity of human syphilitic blood and other tissue fluids for the rabbit has been published in the *Berliner klinische Wochenschrift*. Blood from patients in various stages of the disease was injected into the testicles of rabbits, and although spirochaetes were never demonstrable by examination of the blood by the dark ground illumination, a typical syphilitic orchitis set in, on an average within sixty days of the injection, and in the syphilomata thus produced spirochaetes were frequently found. There were 19 inoculations from typical primary syphilis, and 16 positive results (84.2 per cent.) were obtained. Of 36 inoculations from patients with secondary syphilis the results were positive in 27 (75 per cent.). In 4 cases of late tertiary cases only 1 yielded a positive result. At the time of writing, these investigators were experimenting with milk, urine, semen, and sputum from infected cases, and had obtained positive results in a few, whereas all attempts to convey the disease from the cerebro-spinal fluid of recent syphilitics, tabetics, or paralytics had been fruitless. These results might, they thought, have considerable value clinically, in cases of

doubtful or latent syphilis, and might solve the vexed question of the meaning of a positive Wassermann reaction in cases of latent syphilis, where it was doubtful whether virulent syphilis was present in the organism and potential for harm, or whether the reaction was merely proof of a previous and possibly unobserved infection. Furthermore, these infected rabbits would afford most valuable material for the observation of the therapeutic results of various antisyphilitic remedies.

Dr. Hahn had some interesting reports to give at the last meeting of the Medical Congress at Wiesbaden on his results with Behring's new prophylactic vaccine for active immunization against diphtheria. The protection given by the old serum only lasts a few weeks, and repeated injections carry with them the danger of anaphylaxis. Neither of these disadvantages could be urged, he said, against the use of the vaccine, which is a bacterial emulsion, and confers an immunity to the disease lasting for several months. One or two injections are required, and the active protecting bodies are produced in from three to five weeks after inoculation.

PARIS.

Medical Students and Military Service.—Treponema in General Paralysis.—Radioscopy of the Fetus in Utero.—Oculo-cardiac Reflex.

THE proposal to extend the term of compulsory military service, which is now two years, to three will of course apply to medical students. In order to obviate as far as possible delay in their studies, while at the same time enabling them to serve their country as other men do, the staffs of the Schools of Medicine and Pharmacy recommended the adoption of the following resolutions:

Every Frenchman must serve his country when physically fit for a period of three years.

The students of medicine and pharmacy must be under strict military discipline for the same prescribed period as other men.

As the Army Medical Corps is not so efficient as might be in time of peace, and would possibly be inefficient in time of war, it is thought wise that the medical students should serve their time in this corps in the twenty-three towns in which medical and pharmaceutical schools exist. By these means they will be enabled to serve as male nurses in the hospitals and at the same time continue their medical studies.

At a recent meeting of the Society of Biology, Drs. Levaditi, Marie, and Baukowski communicated the results of the examination of the brain in 24 cases of general paralysis. In 2 cases they found the *Treponema pallidum*, thus confirming the findings of Noguchi in such cases. The parasites were found in the cortex of the frontal lobes. In one patient, in whom the disease had lasted seven years, the *treponema* was found in the brain substance. With the ultra-microscope the parasites were demonstrated to be alive and active. The results were confirmed by different methods of staining and also by the Chinese ink method.

At a recent meeting of the Medical Society of the Hospitals, Drs. Potocki, Delherm, and Laquerrière reported results obtained by the radioscopy of the fetus *in utero*. Thanks to the perfect equipment of the department at the new Pitié Hospital, the radioscopic results obtained were useful and interesting; in one case the fetus was photographed as early as the fourth month. Before making such an examination, a purgative must be given and the bowels thoroughly cleared out. The patient lies on her back on the table and the bulb is placed under the table, the plate being fixed on the abdomen. During the exposure the patient must not breathe deeply, or the photograph will be blurred. The time of exposure found necessary was about two and a half seconds. By this means the various presentations could be made out and useful information obtained regarding the probability of a normal labour.

Drs. Loeper and Mougeot made a communication recently to the same society on the "oculo-cardiac" reflex. They found that the cardiac rhythm might be affected by pressure on the eyeballs. In the normal subject the pulse-rate decreased by some six beats a minute. In nervous disorders of the stomach the reflex was exaggerated when the symptom-complex pointed to over-excitability of the pneumogastric nerves; it was diminished when the sympathetic was involved. In a case of ulcer of the lesser curvature of the stomach marked slowing of the pulse due to irritation of the vagus nerves was observed.

Correspondence.

RESEARCH DEFENCE SOCIETY.

Special Appeal.

SIR,—We have carefully considered what course our society ought to pursue in view of the recent exposure of antivivisection. We are of opinion that the society ought to maintain for some years in London a place of its own where it could put before the public, every day and all day long, the truth about experiments on animals in this country. We have tried this method in temporary premises and have found it abundantly successful, and we now have the opportunity of acquiring a small ground floor and basement at a moderate rent in one of the more important thoroughfares admirably suited for our work. It is the plain duty of all who desire the prevention of disease among mankind and among animals to help "the man in the street" to arrive at a right judgement in this matter. We are convinced from experience that the best way of dealing with antivivisection methods at the present time is to maintain a bureau where all passers-by can read and learn for themselves the truth about experiments on animals, and can obtain pamphlets and leaflets and ask for further information.

We therefore appeal for generous contributions towards a special fund for this one purpose. It is the especial business of the Research Defence Society to dispel the ignorance, or worse than ignorance, which still exists as to the character and object of experiments on animats in this country; and the maintenance of a bureau in London would be of an immense advantage to the work of the Society. All donations and subscriptions should be sent to the Honorary Treasurer, 21, Ladbroke Square, London, W. All cheques should be crossed Messrs. Coutts and Co.—We are, etc.,

DAVID GILL, *President.*
CROMER, *Vice-President.*
SYDNEY HOLLAND, *Chairman of Committee.*
ARTHUR R. CUSHNY,
ELDRED HORSLEY,
REGINALD TALBOT,
BEATRICE LESLIE THOMSON,
Members of Committee.
F. M. SANDWITH, *Hon. Treasurer.*
May 5th. STEPHEN PAGET, *Hon. Secretary.*

THE OPERATION OF "CHEILOTOMY."

SIR,—The operation of trimming an osteo-arthritic cornice from around a joint margin, described by Mr. Sampson Handley, has no doubt occurred to and been performed by others, who, however, have not been able to invent an appropriate name.

In November last I performed this operation for the removal of a ridge around the anterior, upper and lower margins of the head of the femur in a patient with coxa vara; I had previously, in common, I believe, with many others, performed similar operations on the great toe for hallux rigidus.

Mr. Handley, unfortunately, gives no details of his operative methods. The real difficulty in the case of the hip is the inaccessibility of the joint. In my case I was obliged to approach the joint by an anterior incision, and the chief difficulty was found to consist in the overhanging of a somewhat highly developed iliacus muscle. I opened the joint by a V-shaped incision, the apex of the V being at the root of the neck of the femur, the other ends of the incision being respectively immediately below the anterior inferior spine, and at the lowest accessible part of the acetabular margin. A flap of capsule was turned inwards, good exposure of the joint being obtained. The capsule was sutured with chromic gut, and I allowed the patient to stand without support after a fortnight.

Mr. Handley was fortunate in the amount of movement he obtained. In my case the amount of ligamentous and

muscular contraction has rendered it extremely difficult to maintain the increased mobility which the removal of the bone allowed.

It is to be hoped that Mr. Handley will give us further details of his operative methods; and skiagraphs of the patients after the operation, to illustrate the extent to which the head of the femur was trimmed, would also be of much interest.—I am, etc.,

London, W., May 5th. R. C. ELMSLIE.

RHEUMATOID ARTHRITIS.

SIR,—Sir James Barr admits that no doubt "many organisms set up a monarticular or polyarticular arthritis," also that "certain cases of arthritis are associated with pyorrhoea alveolaris, etc., and have been cured by a vaccine," and then states these cases are "not what we designate rheumatoid arthritis." That is to say, he makes his assertion (that rheumatoid arthritis is simply due to "a mild chronic acidosis") more probable by arguing that any case of monarticular or polyarticular arthritis which can be proved to have a microbic origin is therefore not rheumatoid arthritis.

He defines the disease as "a low chronic polyarticular inflammation," etc., and proceeds to describe it. If an inflammation, why due to acidosis rather than microbe or toxin? Its characteristics being so similar to arthritis due to the latter causes, why refuse to admit any cause but "a chronic acidosis"? Decalcification of bone cannot be admitted as a proof, for it is a common accompaniment of any bone inflammation; skiagraphs show it in tubercle, after fractures in the bone-ends, in whitlow, in terminal phalanges, etc. In the first and third cases one would not suggest acidosis, and they are due to microbic infection.

The wasting of articular cartilages, occurring early and seen as a constant feature in skiagraphs of joints affected by rheumatoid arthritis, seems to me much more possibly due to inflammation caused by microbe or toxin; its irregularity in incidence, attacking cartilages, first one then another, and one part of a cartilage before another part, suggests a series of local infections rather than a general acidosis.

However, until either theory of causation—acidosis or microbe—is proved (which seems well nigh impossible) cases have to be treated empirically, and some will find lime most successful and some iodides. I believe in antibacterial treatment, and consider, with Dr. Luff, that iodides (or iodine) are valuable in causing arrest of the disease.

I am strongly of opinion that the influence of continued cold and wet as a predisposing cause is very great. This disease attacks women in such very different positions in society, who, curiously, give a history of exposure to cold and wet. My cases include, for example, among hospital out-patients, laundry workers, scrubbers, workers in aërated water factories, and, in private, hunting ladies who have had wet gloves on for long together, amateur lady gardeners, ladies who spend much time in washing laces, etc.; some very poor, some wealthy, yet all affected similarly, all with history of exposure to cold and wet.

In a paper on treatment locally by radiant heat and iodine ionization[1] I gave my early experience of the results of a treatment which is now largely used in fibrositis and rheumatoid arthritis. There is no doubt in my mind that, properly carried out, as a local treatment, it has a real value. By this combined method cases of fibrositis can as a rule be cured absolutely, with perseverance for a sufficient time; perhaps Dr. Craig has given ionization up too soon, and that accounts for his failure with it. Treatment daily for a month, or on alternate days for two months is not too long; of course, many cases are cured in a fortnight. "It is," as Dr. Reginald Morton stated in his presidential address on arthritis this year in the Electro-Therapeutic Section of the Royal Society of Medicine, "not enough to get a few ions through the skin, we must endeavour to suffuse the joint with ions, and thus render the site unsuitable to the development of the organism" (he is referring to the bacillus of Schuller as the possible cause of rheumatoid arthritis).—I am, etc.,

Brighton, April 25th. C. FRED BAILEY, Royal Sussex County Hospital.

[1] BRITISH MEDICAL JOURNAL, 1910, pp. 518, 519.

SIR,—I have read with much interest Sir James Barr's address upon this subject, and also his reply to what appeared to me a very fair criticism of his views by Dr. Luff.

Rheumatoid arthritis is a disease in which I have long been interested, and I think I may claim to have some knowledge of the subject, for I have been attached to the Royal Mineral Water Hospital almost continuously for the past twenty-three years, and during that time I have, both there and in private practice, seen and treated a very large number of cases.

First, I would like to say that the more I see of this disease, the less inclined I am to dogmatize about it. A few years ago I made bold, in a paper I read before our local Branch, to assert that there was no such disease as rheumatoid arthritis, but that what we call by that name was in part a bastard form of rheumatism or of gout, and in part an infective arthritis the result of many and different organisms. Granting, however, that there is in this great group of joint affections an inner group which may fairly be regarded as a distinct disease, I will take Sir James Barr's definition of rheumatoid arthritis as applying to this inner group, so that there may be no doubt as to the class of cases I am considering. Sir James Barr defines this disease as "a low chronic polyarticular inflammation with frequent acute exacerbations," etc.[1] I would point out that this definition rests entirely upon clinical features, and I suggest that there should be stronger grounds for establishing rheumatoid arthritis as a distinct and separate disease.

Sir James's definition, of which I have only quoted the first sentence, gives an excellent picture of a typical case of rheumatoid arthritis, and he says that, even in its later stages, "it is still possible to cure the disease, though not the deformities," presumably by administering sufficient lime salts. "If, however," he goes on, "you keep hunting after the germ and its toxin, the patient as well as the joints will become a hopeless wreck."

Sir James dismisses the idea of rheumatoid arthritis being an infective disease as not worthy of consideration. But I have seen cases of undoubted infective origin, from which Sir James's own clinical picture of the disease might have been drawn—cases, for instance, due to pyorrhoea alveolaris and the gonococcus, cases which, according to Sir James, are only associated with these infections, but in which a cure followed the removal of the centres of infection and the use of the proper vaccines. I am more justified in asserting that these cases were due to infection than is Sir James Barr in claiming that they were caused by a decalcifying agent supposed to exist in the blood. Has Sir James Barr tested his theory as severely as he tells us that those who believe in an infective arthritis should test theirs? If in those cases of which I have spoken I had waited to apply the tests of Koch, of which he speaks, both I and my patients would still be waiting for the happy results which followed the, possibly unscientific, use of the remedy.

After all, what evidence is there that Sir James Barr's views as to the causation of this disease are correct? He claims that rheumatoid arthritis is due to a deficiency of lime salts in the body caused by a "mild chronic acidosis," but he does not tell us to what this "mild chronic acidosis" is due. He is met at the outset with the difficulty of explaining the later osteo-arthritic forms of the disease, for he says, "It is true that the deposit of lime salts may take place in the final stages of rheumatoid arthritis," and adds that this is "Nature's clumsy method of effecting a cure." In such a case as this, will Sir James Barr tell us when the change took place in the "mild chronic acidosis" so that the extracting of the lime salts from the bones and tissues ceased and their deposit began? Are we to understand from Sir James Barr that Nature, after extracting the lime salts and recognizing that she has gone rather too far, begins in a "clumsy method" to lay them down again? In his letter in the

[1] BRITISH MEDICAL JOURNAL, p. 753.

JOURNAL of April 26th, he says if Dr. Luff has any doubt about the extraction of the lime salts from the bones he had better look at some skiagrams. I think Dr. Luff's doubts upon this point are well founded, and I suggest that something further than the evidence from skiagrams is needed to prove this point. During recent years I have taken a large number of skiagrams at the Royal Mineral Water Hospital, and the conclusion I have come to is that in rheumatoid arthritis, and in other diseases where the tissues are wasted, the bones are more translucent than is normal, but that no reliance in diagnosis could be based upon this method.

According to Sir James Barr, rheumatoid arthritis begins in the larger joints and spreads to the smaller. This is entirely contrary to my experience. It is in the smaller joints, especially of the hand, that it first begins, and often, as Dr. Kent Spender pointed out, in the joint and muscles of the thumb.

That it is more common among the poorer classes I quite allow, but it is also seen only too often among the well to do. If the poverty of the one causes the "mild chronic acidosis," does the plenty of the other do the same?

As to the dilated stomach which Sir James Barr says is "almost invariably" present, and the albuminuria of the later stages accompanying the effusion into the joints, my experience and his do not at all agree, though of course either of these conditions may be present in special cases.

With regard to diet, and remembering the "mild chronic acidosis," Sir James Barr said acid fruits and sugar are to be avoided, though a little marmalade may occasionally be allowed. I have always understood that in a pound of marmalade there is more than half a pound of sugar and the rest is made up of the acid fruits that he says should be avoided.

That cases of this disease are benefited by the drugs that Dr. Luff advises, and upon which Sir James Barr pours such contempt, I am sure, and I have equally no doubt that in Sir James's hands good results have followed the use of lime salts, though their administration is based upon a theory that he has not proved.—I am, etc.,

Bath, May 4th. PRESTON KING, M.D.

SIR,—The general practitioner in these days of specialism is not credited with knowing much about anything, but if there is one class of ailments of which he may claim some knowledge, it is rheumatoid arthritis and "rheumatic" affections. An experience of thirty years' practice in health resorts, during which period I have seen scores of cases of rheumatoid arthritis proves that Sir James Barr's statement about potassium iodide, arsenic, etc., is correct. The most absolutely useless drug to administer in this disease (or any other disease) is guaiacol carbonate. It has no influence either in mitigating the symptoms or moderating the course of the disease. What it does is to upset the patient's digestion, causing continuous disgusting eructations and adding generally to already existing miseries. I have asked many brother practitioners if they have ever tried it, and they all answered in the negative, and a leading chemist recently told me that he did not even stock it, there being no demand for it. There are one or two useful remedies for rheumatoid arthritis, but guaiacol carbonate is not one of them.—I am, etc.,

Margate, April 27th. PERCY NEWELL.

SIR,—Dr. Luff's tale of injured innocence will deceive no one. He should remember that when he enters the pages of the BRITISH MEDICAL JOURNAL he is not lecturing a class of students who must accept his statements as gospel truth. The only effect which his letter has on me is to make me take off the gloves, and I shall not put them on until I have not left him a leg to stand upon.

The rarefaction and even in extreme cases crumpling up of the ends of the bones; the thinning and erosion of the cartilages; the effusion into the joints; the swelling of the fibrous tissues; the wasting, weakness, and increased irritability of the muscles with frequent effusion into their fibrous sheaths; the neuralgia and neuritis in cases of rheumatoid arthritis afford no proof to Dr. Luff of the extraction of the lime salts from these respective tissues. What, then, does he imagine that these allied phenomena prove? If he be not satisfied with the skiagrams which he sees, surely out of his thousands of cases he will have an opportunity now and again of making a *post-mortem* examination. He will then be able to examine these tissues both physically and chemically. When he can show me anything else except an acid which will extract the fixed lime from these tissues, I shall reconsider my position. In the meantime, while he is waiting for the autopsy, as something which will readily come within his cognizance, he might study the extraction of the lime salts from a carious tooth.

I have shown that with the phenomena which constitute rheumatoid arthritis there is an excessive excretion of lime and phosphates; that the normal amount of lime in the tissues is diminished, and in the case of the ends of the bones entering into the affected joints this is apparent to the most casual observer; that nothing will extract these fixed salts of lime but acids; and that again you can induce the phenomena of rheumatoid arthritis by the free administration of phosphoric acid and citric acid, especially when you cut the lime salts out of the diet. There is another experiment with the lime salts which I would advise Dr. Luff not to try; a person can readily and rapidly kill himself by converting the lime salts in the blood into the insoluble oxalate. I must apologize to the intelligence of your readers for this verbose explanation, which, however, seems to be necessary.

Dr. Luff apparently does not take kindly my prescription for sharpening his wits, but I can assure him there is nothing heroic or new, and the experiment is well worth trying. In 1910 I said, If you want to think quickly, speak quickly, and act quickly you had better not have too much lime in your nervous tissue.

I tried to lay my hands on a few of Dr. Luff's thousands of cases of rheumatoid arthritis, but I failed, as St. Mary's Hospital, which used to be considered a very important teaching centre, does not publish any statistics of the cases treated there. My countryman, George Bernard Shaw, says that every one should be required to prove the necessity for his existence at least every ten years, and I certainly think that a specialist who has had thousands of cases of rheumatoid arthritis under his care, and has got no "forrader" with the treatment than an abominable and useless mixture of guaiacol carbonate and potassium iodide is on his defence.

I may now in as serious an air as I am capable of assuming assure Dr. Luff that the best treatment for rheumatoid arthritis is to prevent its occurrence. This is the end of the second round and I am still smiling. By the time we get to the fifth or sixth round the subject of rheumatoid arthritis will be getting very interesting.—I am, etc.,

Liverpool, May 3rd. JAMES BARR.

ADRENALIN IN CHLOROFORM ANAESTHESIA.

SIR,—The thanks of the profession, and of anaesthetists in particular, are due to Mr. Depree for publishing his fatality after the injection of solution of adrenalin chloride during light chloroform anaesthesia.

The importance of the paper read by Dr. Goodman Levy at the annual meeting at Liverpool cannot be overestimated nor the results of his experiments too widely known in order that these fatalities may be avoided in the future. Clinical experience has unfortunately confirmed Dr. Levy's results, though against them it has been urged that adrenalin has been injected during light chloroform anaesthesia in hundreds of cases without any untoward results. The reason is, I think, obvious—namely, that danger only arises in cases where some small blood vessel has been pierced, and the solution has found its way directly into the blood stream, an accident that can neither be foreseen nor prevented.

Of all the excellent work done in the Anaesthetic Section at Liverpool, two papers made an indelible impression on me—the one referred to above, and a paper by Mr. R. E. Apperly, in which, *inter alia*, he brought forward experimental proof of the increased risk of fatal acidosis after the administration of chloroform in the presence of abdominal sepsis. This is a digression, but I refer to the matter in the hope that catastrophe from this source also may be avoided in the future.—I am, etc.,

London, W., April 26th. G. A. H. BARTON.

SIR,—The thanks of all who are interested in the subject are due to Dr. Depree for his report (p. 879) of a death under chloroform anaesthesia following the submucous injection of a solution of adrenalin. I may, perhaps, be permitted to refer to three points in connexion with the case that appear to me to be of interest from the point of view merely of those who are frequently called upon to perform the operation of submucous resection of the nasal septum: (1) I think a 1 in 1,000 solution of adrenalin is too concentrated for submucous injection. (2) A general anaesthetic is, I think, rarely required for the operation in question in a man aged 26. If a method such as that of Freer be employed, perfect local anaesthesia can be obtained. (3) I do not consider submucous injection of adrenalin solution necessary as a preliminary to submucous resection of the nasal septum under general, or, for that matter local, anaesthesia. I have always obtained satisfactory haemostasis by the surface application of strips of gauze soaked in a solution of cocaine (10 per cent.) in adrenalin chloride 1 in 1,000, for from three-quarters to one hour before the operation.—I am, etc.,

Liverpool, April 29th. THOMAS GUTHRIE.

SYPHILIS AND CANCER OF THE TONGUE.

SIR,—Your correspondent, Dr. Aston Key, says Mr. Clement Lucas used to teach that the three great causes of cancer of the tongue were syphilis, smoking, and mercurial stomatitis. I think it was Alfred Fournier who first emphasized the importance of syphilis as a primary and tobacco as a secondary cause of lingual cancer. As regards mercurial stomatitis as an exciting cause of cancer of the tongue, the evidence is rather against this view, because under modern mercurial treatment stomatitis is, or should be, either mild or absent, while the incidence of cancer of the tongue apparently has not diminished. In this connexion it will be interesting to see whether this incidence will be diminished by salvarsan treatment. As regards the Wassermann reaction, perhaps it may be positive in the majority of cases of lingual cancer, but so is a history of syphilis; and, as Mr. Ryall wisely remarks, a positive Wassermann reaction does not exclude cancer. It might be added that it does not exclude any other disease. The main point is that Mr. Ryall, by his series of cases of cancer of the tongue, has confirmed the doctrine of Fournier—that syphilis is the primary cause of lingual cancer.—I am, etc.,

London, W., April 28th. C. F. MARSHALL.

SIR,—I have to thank Mr. Ryall for his courteous reply to my letter relating to cancer of the tongue and the percentage of cases resulting from active syphilis.

Mr. Ryall indicates that, because a history of syphilis is obtainable in 82 per cent. of cases, syphilis is an active factor in the development of this condition, and in his lecture that "The thorough treatment of syphilis would well-nigh abolish cancer of the tongue." Mr. Ryall's argument very much resembles *post hoc, ergo propter hoc*. One might as truly say that because a patient has been taking mercury by the mouth for so many years therefore cancer of the tongue is due to the stomatitis associated with the too free ingestion of this metal. In this connexion one remembers the statement, due, I believe, to Mr. McDonagh, that on the Continent cancer of the tongue is rarer than in this country, where internal administration is much more largely used than the other methods of administering this metal.

The Wassermann reaction appears to have been tested in seven cases. I maintain, however, that if the reaction be applied to a large number of cases the percentage of cases in which one can definitely say that a syphilitic process plays an active part will be very much smaller.

In view of Mr. Ryall's association with the Lock Hospital as well as with the Cancer Hospital, is it not possible that an unduly large proportion of the tongue cases have first been met with at the former hospital?

Dr. Leitch has overcome the supersensitiveness of his complement by using two serums. I overcame that objection by testing the strength of complement previously, by testing each patient's serum on more than one occasion, and by testing them along with serums which I had had under observation on many previous occasions.

It is useless to argue that one method is better than another unless the same serums are used in a large number of cases. I am anxious to investigate this question to the utmost, not only in cases of cancer of the tongue, but also by means of the Wassermann reaction to ascertain the relationship of syphilis to cancer in other situations. If Mr. Ryall will further extend his courtesy, I would suggest that the serums from such cases be exchanged between the two hospitals, that Dr. Leitch check my results by his methods, while I for my part will undertake to test most carefully any serums he will be good enough to forward to me.

I have the consent of Dr. Wild, the Chairman of the Medical Board at the Cancer Hospital in Manchester, to exchange serums for this purpose, and I can assure Mr. Ryall and Dr. Leitch that so far as I am concerned I am prepared to investigate the matter most fully.—I am, etc.,

Manchester, April 29th. ARNOLD RENSHAW.

EVIDENCE FOR AND AGAINST THE USE OF TUBERCULIN.

SIR,—I should like to congratulate Dr. H. Batty Shaw on the prominent position which he assigns to Nature's efforts in the cure of tuberculosis. If therapeutics is ever to be raised to a satisfactory scientific level, the enthusiasm of the therapeutist must not be permitted to obscure this cardinal fact to which Dr. Shaw directs attention. The crucial experiment, however, of leaving Nature entirely alone in one series of cases and introducing this or that factor in other series cannot, for obvious reasons, be made. It seems to me, therefore, that in this, as in most other departments of medical work, the verdict must ultimately rest on a consensus of opinion of careful clinical workers of wide experience. To expect cures in the sense that the man in the street expect cures is, I think, to expect too much. The question is not so much whether we can make absolute cures in that sense, as whether we can to any real extent assist Nature's efforts, as distinguished from mere routine meddlesomeness.

After a number of years' constant use of tuberculin I am convinced clinically (1) that in the doses suggested by Sir Almroth Wright it does no harm in afebrile cases; and (2) that in a very considerable percentage of such cases real good is effected. I may say that the pulmonary cases upon which I base my conclusion as to the value of tuberculin were not early cases, but I may add that they were not continuously febrile. In this latter class I have failed to do any perceptible good, possibly because here Nature fails to do her fair share of the work. I do not suggest that specific treatment in this type of case is absolutely valueless; all I say is that it has failed in my hands, even in cases in which some evidence of immunizing response (evidenced by improvement of appetites and general feeling of well-being) was obtainable. On the other hand, to any one who has treated a moderate number of gland cases, for example, with secondary infections by means of tuberculin and autogenous vaccines, the question as to the value of such treatment is no longer open. It rests with the sceptic either to remain a sceptic or convert himself by practical experience.

Dr. Shaw admits that "all vaccine treatment is capable of effecting a change in the aspects of disease." Whether that is strictly true as a general proposition, I am not prepared to say; but I think that there is now available a large amount of evidence that in many chronic ailments there is such a change and, if the method be properly employed, that the change is in a curative direction.

In conclusion, I should like to add that some individuals of a neurotic type seem to be abnormally sensitive to tuberculin, and for this reason, if for no other, any uniform or rule-of-thumb method of using it appears to me objectionable. Tuberculin is a remedy, I think, which demands the most careful consideration of each case on its merits.—I am, etc.,

J. STAVELY DICK,
Honorary Clinical Pathologist, Northern Hospital.
Manchester, May 6th.

EXISTING UNSATISFACTORY CONDITION OF THE SCHOOL MEDICAL SERVICE.

SIR,—May I be allowed to call attention to the existing unsatisfactory condition of the school medical service of this country, both as regards organization as well as regards the future prospects held out to those desirous of devoting their lives to this branch of medical work?

In the larger centres there are at present two systems of organization of the school medical service. Under the first the medical officer of health has also been created school medical officer; under the second, the two offices are held by different individuals, assistance being given under both systems by a staff of subordinate officers known as school medical inspectors. Considering the ever-increasing number of duties imposed on medical officers of health, it is practically impossible for them to take any active part in the work of the school medical department; moreover, the duties of a school medical officer include many matters, such as the diagnosis of mental deficiency and its educational treatment, the examination and educational treatment of the blind and deaf (both total and partial cases), and a host of other matters too numerous to mention, which find no place either in the training or experience of medical officers of health as such. Practically the whole of the work, therefore, passes into the hands of young and inexperienced assistants, who, in the absence of any hope of future advancement in the service, are constantly coming and going, and consequently never become really experts at their work.

The second system could undoubtedly be developed into a highly satisfactory and efficient national service, the school medical officers being selected from the more experienced and efficient of the subordinate officials—the school medical inspectors. By this means the placing of the control of the service in thoroughly experienced and competent hands would be assured.

There are at present twenty-two county boroughs where the school medical officer is an official distinct from the medical officer of health. There appears, however, to be a movement in many of these cases on the part of directors and secretaries of education to assume control over these school medical officers and their work, a movement which, if not promptly nipped in the bud, will result in the spectacle of laymen assuming direction of the work of medical departments.

The result under either system has been to make members of the service either assistants to the medical officer of health, or, in the case of those that are not, the penalty is incurred of being classed on the same level as regards both salary and status. Of the twenty-two county boroughs above referred to, in six instances only does the salary of the school medical officer amount to £500 a year; in most it appears to average about £300, and in some even less. The usual salary of a medical inspector is £250. These figures refer entirely to full-time appointments. A condition of things which holds out no better prospects to would-be entrants into the service than that of remaining for life in the position of assistants and drawing the salaries of assistants must not only prove a barrier against any further development of its efficiency, but must also inevitably result in its early and rapid deterioration.—I am, etc.,

ROBERT HUGHES, M.B.Lond., etc.,
School Medical Officer,
Stoke-on-Trent, May 3rd. County Borough of Stoke-on-Trent.

THE PARISH DOCTOR AND HIS OPPORTUNITY.

SIR,—I quite agree with Dr. Morley Lynch's letter of April 12th. It is high time that the Poor Law medical officers struck for better pay. Speaking generally, the pay is not half as good as that obtained from insurance work, which is generally considered inadequate.

In my own particular case, for a workhouse with some 270 inmates, with 125 sick beds in the infirmary, I am paid £60 a year and have to supply drugs, whereas 270 insured, healthy people at 8s. 6d. a head (being beyond the three-mile limit) would give £114 15s. My salary works out that for 7s. 6d. I have to drive six miles, see 125 sick persons, supply all drugs, etc., which is less than 1d. a patient and is just the cab fare to see the patients and back.

As district medical officer I am paid at the rate of 8d. a visit with medicines, and I often have to drive 18 miles, as my district is a wide one.

Surely united action on our part would stop this sweating.—I am, etc.,

DUDLEY W. BOSWELL, M.D.,
Medical Officer, Mutford and Lothingland Union
Lowestoft, April 29th. and Workhouse.

TRADE UNIONISM AND MEDICINE.

SIR,—The medical profession is to be congratulated on the success of the appeal in the case of Heard *v.* Pickthorne and others, and the case seems to show the necessity for the existence of a strong body, whose primary object shall be to watch over the position of medical men in relation to the Insurance Act. The British Medical Association found itself unable to advise action in the matter, but the National Medical Guild decided to take up the case, and, notwithstanding the reverse suffered in the King's Bench, pressed the matter to appeal, and has succeeded in maintaining due recognition of medical certificates, whether panel or non-panel.

Dr. Gordon Ward has ably shown reasons why the body to deal with Insurance Act questions should be registered as a trade union, notably in order to be free from liability to libel actions, and with a view to obtaining in the future representation in Parliament. In the meantime it would be well for the attention of the Divisions to be drawn to a proposal from Leicester which is on the agenda for the Representative Meeting. It is suggested that the Association should recognize a trade union, working apart from the Association but under its aegis. Such a body might very well be developed from a federation of trade unions already formed or in process of formation. It should aim at representing the whole profession, and, while demonstrating that it does not exist for the purpose of "smashing the Act," it should press forward a policy for restoring the freedom of the profession while safeguarding the interests of the community. As outlines of such a policy may I suggest the following?

1. Ultimate abolition of the "panel" in the future.
2. Fullest possible measure of "contracting out" in the present.
3. Abolition of lay control in medical matters.
4. Substitution of medical referees in place of the proposed medical inspectors.
5. Recognition of wage limit.
6. Curtailment of unnecessary forms and records.

In addition to advocating these improvements in the Act and Regulations, the trade union would take up any question of arbitrary action such as that involved in the case of Heard *v.* Pickthorne, and numerous other points that are bound to arise in the administration of an Act which makes great inroads on the freedom of the public.—I am, etc.,

London, W., May 5th. CHAS. BUTTAR.

THE ETHICS OF ANTIVIVISECTION.

SIR,—You have done me the honour to devote five and a half columns of your issue of May 3rd to what I am sure you intend for an attack upon me. But as a considerable portion of your article consists of verbatim reproductions of what you describe flatteringly as my rhetoric, I can view with more complacency the remainder written by yourself.

I see no ground for your pleasantry in the matter of my phrase "ocular demonstration." In its place as I used it, the expression was felicitous and appropriate. I had already received auricular evidence of the presence of dogs in pain at the laboratory at University College; what I sought for was confirmation or confutation of that auricular evidence by the use of my eyes. If I had seen the dogs with the wounds in them after vivisections performed on them under Certificate B, and observed with my eyes that their howls were induced by those wounds, I should have come away, as I remarked, "armed with ocular demonstration that the dreadful cries which I had heard emanated from dogs whose dolorous clamour was caused by the wounds in their bodies inflicted on them under Certificate B."

I entirely appreciate why you imagine you can with safety represent me to your readers as an illiterate person. The absorption of many of them in the pursuit of some

confined corner of science precludes them from a study of the classics, which alone could make them capable of perceiving the absurdity of your efforts. In your concluding paragraph you recommend me "not to rush into print again with descriptions of dolorous clamour caused by wounds inflicted under Certificate B, till he has had ocular demonstration that the dreadful cries do not emanate from untouched dogs protesting that they are debarred from following the instinct of Nature, 'red in tooth and claw.'" It is idle to upbraid me in this manner for not doing exactly what I endeavoured to do. You bid me go to the laboratory and see for myself. That is precisely what I did, and was refused admission.

As to the silly anonymous letter which you think it worth while to reproduce in facsimile across two whole pages of your JOURNAL, I know nothing about it. I myself, like most public men who advocate anything with firmness, am constantly subjected to every sort of filthy anonymous communication. But I do not publish them in the *Zoophilist;* if I did, I dare say my opponents would accuse me of writing them to myself for the purpose of creating prejudice. I make no such accusation against Professor Starling; I simply think him foolish to take any notice of such things.—I am, etc.,

London, S.W., May 6th. STEPHEN COLERIDGE.

MEMORIAL TO MR. ETHERINGTON-SMITH.

SIR,—At a meeting held at St. Bartholomew's Hospital on May 1st it was decided to open a subscription list for a memorial to the late R. B. Etherington-Smith.

It is suggested that the memorial should take the form of providing and endowing separate sick quarters at St. Bartholomew's Hospital for the use of the medical, surgical, and resident staff, and of providing a suitable memorial at Cambridge.

Etherington-Smith's life-work was so bound up with St. Bartholomew's that this form of memorial will doubtless commend itself not only to his colleagues in the profession, but also to the larger body of men who knew and admired him as an oarsman and friend.

The scheme has received the cordial approval of his family.

Subscriptions will be received by the Honorary Treasurer, Dr. T. W. Shore, Dean of the Medical School, St. Bartholomew's Hospital, E.C., or they may be sent to the "Etherington-Smith Memorial Fund" at the Bank of England.

(Signed) ANTHONY A. BOWLBY, C.M.G., Senior Surgeon to St. Bartholomew's Hospital.
W. B. CLOSE, C.U.B.C.
G. ACTON DAVIS, Acting Treasurer, St. Bartholomew's Hospital.
J. H. GIBBON, C.U.B.C.
HARCOURT GOLD, O.U.B.C.
W. P. HERRINGHAM, Senior Physician to St. Bartholomew's Hospital.
R. C. LEHMANN, C.U.B.C., Secretary to the Fund.
HOWARD MARSH, Professor of Surgery, Cambridge University.
S. D. MUTTLEBURY, C.U.B.C.
GUY NICKALLS, O.U.B.C.
G. D. ROWE, O.U.B.C.
H. T. STEWARD, Leander R.C.

THE eighty-fifth annual meeting of German scientists and medical practitioners will be held at Vienna in September (21st to 26th). Among the communications to the medical section will be one by Professor von Behring on the prophylaxis of diphtheria.

A NUMBER of medical charities benefit under the will of the late Colonel Frank Shuttleworth, of Bedford and Lincoln, among them being Lincoln County Hospital, £2,000; Lincoln Dispensary, £500; Bedford County Hospital, £3,000; Bedford Dispensary, £500; Middlesex Hospital, £1,000; the Cancer Hospital, £1,000; and the Great Northern Central Hospital, £500.

THE Corbett Hospital for Children, Amblecott, near Stourbridge, in Worcestershire, is the recipient of a sum of £5,000 under the will of the late Mr. Edward Webb. The sum is bequeathed in memory of the testator's wife, and is to be used for the building and equipment of a new wing.

Obituary.

JOHN CHARLES THOROWGOOD, M.D., F.R.C.P.,

CONSULTING PHYSICIAN, CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

THERE passed away last month at Bognor, in the person of Dr. J. C. Thorowgood, a fine representative of the transitional period of medicine and a physician who at one time played a very active part in the professional life of London. He had been living at Bognor since his retirement from practice some twelve years ago, and died in the eighty-first year of his age, on April 25th, after a very short illness.

Dr. Thorowgood was the son of a schoolmaster, and received his general education at his father's school at Totteridge, in Hertfordshire, then quite a small village. He completed it in the Art Faculty of University College, where he was a prizeman both in Latin and Greek. Subsequently he joined its medical faculty, and evinced therein the same aptitude and industry that he had displayed as a student in arts. Erichsen, who was then the professor of surgery, awarded him the silver medal, and subsequently the Fellowes medal for clinical work also fell to his lot. He fared equally well at the hands of the London University examiners, winning gold medals both in chemistry and medicine at his M.B. examinations. These he completed in 1855, and became about the same time L.S.A. A year previously he had been admitted M.R.C.S.Eng., and in 1857 graduated M.D.Lond. Meantime he rounded off his work by acting as assistant to his sister's husband, who was in general practice in the provinces, and then, after spending some time in the South of France in charge of a patient, returned to London to start a career as a consultant.

His first success in this direction was his appointment as physician to the Royal General Dispensary in Bartholomew Close, an ancient institution which has been the early training ground of many distinguished men, and where he had as colleague the late Dr. James Andrew, afterwards senior physician of St. Bartholomew's Hospital. Next came his appointment to the assistant staff of the City of London Hospital for Diseases of the Chest, a post for which he qualified by becoming a Member of the Royal College of Physicians. Here, too, he had James Andrew as a colleague, for there were two vacancies for an assistant physician at this hospital, and both received appointment on the same day. This appointment assured Thorowgood's success, and little by little he attained the prominence in the medical life of London to which his personal qualities and professional abilities certainly entitled him.

His connexion with the City of London Hospital lasted to the end of his life, for on his retirement from the post of senior physician under the age clause in 1885 he was elected consulting physician. His connexion with the West London Hospital, where he was physician, was almost equally long. He also served the Middlesex Hospital, though not as a member of its staff. His work there lay in the school, where in 1872 he succeeded Sir Lauder Brunton as lecturer on materia medica and therapeutics, and in the same year delivered the introductory address at the beginning of the winter session.

To the Fellowship of the College of Physicians he was elected in 1874, and during the last year of his life in London he served on its Council. The Medical Society of London was also indebted to him, for he acted as one of its honorary secretaries for some years, and at the time when Sir Erasmus Wilson was president delivered the Lettsomian Lecture. He was also one of its vice-presidents. More important still, perhaps, was the work that Dr. Thorowgood did at the Society of Apothecaries. He became one of its examiners at an early date, and for four years was chairman of its board of examiners. He was also a member of the Society and filled the office of Warden. In the natural course he would have served a year as Master, but when the time came the condition of his health necessitated his refusal of the honour. Other offices which he held were those of consulting physician to the Royal National Hospital for Consumption and the presidency of the West Kent Medico-Chirurgical Society.

Unlike many of his contemporaries, Thorowgood did a good deal of writing on professional subjects. Apart from contributions to the medical journals he published several

books. His *Notes on Asthma*, which contained a good deal of the material on which his Lettsomian Lecture was based, went through three editions; while two appeared of a book on materia medica which he wrote for students. Curiously enough, the least successful of his publications was the one which in many respects is of the most permanent interest; this was a book entitled, *The Climatic Treatment of Consumption;* it was written by him quite early in his career and put forth views which are in consonance with present conceptions. He combated the notion that phthisical patients should be sent to mild climates, and argued that, on the contrary, bracing resorts must be best for them, since they would have a tonic influence and improve digestion and the constitutional strength of the patient.

Dr. Thorowgood married in 1863 Miss Ashwin, of Bourton-on-the-Water, Gloucestershire, by whom he was predeceased, but he leaves several daughters.

PROFESSOR JACCOUD,

SECRETARY OF THE FRENCH ACADEMY OF MEDICINE.

Dr. S. Jaccoud, Perpetual Secretary of the Academy of Medicine and former Professor of Clinical Medicine in the Paris Faculty, has recently died at the age of 83. He was born in Geneva and received his literary education in that city. He went to Paris in 1849 with only a few letters of introduction, and at first, while studying medicine, he had to make his living by giving lessons in literature and music. He also put his talent as a violinist to use in the orchestras of the Odéon, the Gymnase, and the opera balls. Later he taught anatomy. He had a brilliant career as a student. He gained the coveted post of *interne*, coming out first on the list. Four years later he was awarded the gold medal of the *internat*. He took his doctor's degree in 1860 with a thesis on the conditions producing albuminuria. He won the appointment of physician to the hospitals in 1862 at his first trial, again being first among the candidates; the following year he became *agrégé*, also at the first trial, and again with the first place. These successes are said to be almost unparalleled. His thesis for the position of *agrégé* was written and printed in less than a fortnight; it shows a deep knowledge of the history of medicine, whilst the point of view is entirely modern. In 1876 he became professor of internal pathology. In 1883, after the death of Lasègue, he was at his own wish transferred to the chair of clinical medicine at the Pitié Hospital, where he remained during the rest of his teaching career. Jaccoud was elected a member of the Académie de Médecine in 1877; he was president in 1898, and became its perpetual secretary in 1901. Among his works are an annotated translation of *Graves's Clinical Medicine* (1862); *Paralysis and Atony of Movement* (1864); *A Treatise of Medical Pathology* in two volumes (1870–71), the last (seventh) edition in three volumes appeared in 1882; clinical lectures delivered at the Charité Hospital (1867); and the Lariboisière (1873); a monograph on the curability and treatment of pulmonary phthisis (1881); and *La clinique médicale de l'hôpital de la Pitié* (vol. iv, 1883–1888). To foreigners his name is perhaps best known in connexion with the *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques* (1864–1886), a medical encyclopaedia in many volumes published under his direction, to which he contributed a number of articles dealing with albuminuria, diabetes, endocarditis, and other subjects. He had a wide acquaintance with foreign medical literature and was thus able to put before his pupils and readers very complete accounts of the actual state of medical science. His vast knowledge, together with the precision and clearness of his ideas, and his great gift of expression, made him a first-rate teacher. In his work he opened up new paths and was looked upon as one of the most advanced among his contemporaries. He scorned popularity and never stooped to the mean arts by which it is acquired. He was a man of austere integrity, and when his conscience showed him his duty he followed its dictates with a firmness which often seemed opposed to his own interests. His independence made him hold himself aloof from all coteries. Those admitted to his intimacy knew the goodness of his heart and the affectionate sympathy which he could display when the occasion called for it. The dignified aloofness in which he lived, however, served to hide those amiable qualities.

E. J. W. CARRUTHERS, M.D.Edin.,

CONGLETON.

The death of Dr. Edward John Walter Carruthers, of Congleton, which was briefly noted in our columns at the beginning of last month, has removed from the ranks of medicine at an early age a man who had the gift of winning the warm affection, as well as the respect, of those who came in contact with him. He received his medical education at the University of Edinburgh, where he graduated M.B., C.M. in 1891, proceeding to the M.D. some four years later. In the meantime he had obtained a wide knowledge of his profession by institutional work, among the posts that he filled being those of senior resident medical officer to the Hospital for Sick Children at Pendlebury, and resident physician to the Royal Infirmary at Edinburgh. For a considerable period also he assisted his father-in-law in the conduct of the Wye House Asylum at Buxton. At Congleton he settled in practice some sixteen or seventeen years ago as successor to the late Dr. Moss, and at the time of his death, which occurred in the 46th year of his age, he was honorary surgeon to the Congleton Cottage Hospital, and medical officer to the Congleton Union. Some of his characteristics, both as a practitioner and as a man, are well brought out in a letter from another medical man who at one time served him as an assistant. After expression of his sympathy with Dr. Carruthers's family and of his own sense of loss, and some references to Dr. Carruthers's skill as a practitioner and the position he held among his fellows, he writes as follows:

> My sojourn with him was the happiest time of my life. He was a splendid man for a young graduate to go to, and many of his assistants must, like the writer, have a lot to thank him for. One got well grounded not only in diagnosis and treatment, but in the general routine of practice. He taught you things that the textbooks do not and cannot teach. He was particularly strong on the duties of a medical man towards his brother practitioners and on questions of medical etiquette, and for many acts of kindness towards myself and my family my heart is truly grateful to him.

Dr. Carruthers, in short, was one of those general practitioners who form the real backbone of the profession, bringing to their work as they do not alone up-to-date book knowledge, but clinical experience and the power of correct observation and the influence of high ideals. As might be expected of such a man, Dr. Carruthers was a staunch upholder of the British Medical Association, and held the view that every young man should join its ranks as soon as he is entitled to do so. Dr. Carruthers was married, and is survived by his wife and several children.

We regret to announce the sudden death of Dr. Robert Hopeton Browne, Medical Superintendent Officer of Health for the Rathmines Township, on April 29th. His father was one of the first Township Commissioners elected after the incorporation of the district in 1847, and his brother, the late Mr. Vere Ward Browne, was for many years a member of that body. Dr. Browne was educated at Trinity College, and as a student of the Royal City of Dublin Hospital gained the Purser Studentship. He took the degree of M.B. in 1868, and that of M.D. in 1871. For some time he studied in Paris. He took the Fellowship of the Royal College of Surgeons in Ireland in 1876. He early gained a considerable practice, and was elected to the Board of Commissioners of Rathmines. He relinquished this position when he became medical officer of the dispensary. He was appointed medical superintendent officer of health in January, 1898, and discharged the duties of that post with conspicuous ability. Though for the last twelve months he had been in bad health, it was only recently that his illness took a serious turn. He was an enthusiastic golfer and vice-president of the Rathfarnham Club. At a special meeting of the Rathmines Council, the following resolution was passed:

> That this meeting has heard with the deepest regret of the death of Dr. Browne, with whom we have been associated so long as medical superintendent of health. The loss of one who has been for so many years closely associated with everything tending to the advancement of the township is keenly felt by us, and we desire to express our deep sympathy with Mrs. Browne and the other members of his family.

THE announcement of the sudden death of Dr. MACCORMAC was received in Belfast with much regret, and great sympathy is felt with his widow and family. Dr. MacCormac was in his usual health and was taking a quiet walk after dinner on April 20th on one of the country roads in the neighbourhood of the city; when opposite the gates of the Forster Green Consumptive Sanatorium he became suddenly ill and fell; the resident physician was immediately summoned and rendered such aid as the emergency demanded, but death supervened. Dr. MacCormac, who took the diplomas of L.R.C.P. and S. Edin. in 1867, graduated M.D.Durh. in 1885. After a short residence in Belfast, he practised for a time in England, but returned to Belfast nearly twenty-five years ago, and specialized in nervous diseases. He was mainly instrumental in starting the Hospital for Diseases of the Nervous System, Belfast; at the same time he opened a private institution for the same class of disease. He made several contributions to the journals and medical societies.

Medico-Legal.

MEDICAL CERTIFICATES UNDER THE INSURANCE ACT.

THE case, Heard *v.* Pickthorne, which came before the Court of Appeal on May 1st, raised the question whether a friendly society is entitled to refuse payment of a claim on its State sick fund unless the certificate in support of the claim is signed by a medical man on the panel, and the three Judges of Appeal unanimously decided in the negative. In other words, they ruled that a certificate signed by a non-panel medical man is valid for the purposes of the National Insurance Act. The facts in the case had already been considered on two occasions by judges of the High Court, and the hearing of the appeal was expedited in view of the public importance of the matter. For the same reason the proceedings were reported in detail by the *Times* and the *Morning Post*. We derive the following summary of matters from the former paper:

The plaintiff in the original action—that is to say, the appellant in the appeal action—is a member of a London branch of the Ancient Order of Foresters, and brought an action against the administrators of that society on behalf of himself and all other members other than the administrators on the following ground: Having been ill, he claimed an allowance out of the sick fund, presenting a certificate signed by his own medical man, but the defendants declined to pay it unless the plaintiff obtained and presented a certificate of sickness from a doctor on the panel. This refusal was based on a resolution of the society which affected all its members, and which resulted from a discussion on the question of what medical certificate should be accepted to place members on the State sick fund. The resolution was "That in every instance a certificate from a panel doctor must be sent." The plaintiff, believing that this resolution and the consequent refusal of his claim was illegal, *ultra vires*, and not enforceable, applied in the first instance to Mr. Justice Bucknill for an interim injunction against the defendants. This being refused he made a request for a declaration to this effect in an action before Mr. Justice Bailhache. The defendants met it by asserting that the resolution was not illegal and that the dispute as to the granting of the sick pay ought to be decided by arbitration under Section 67 of the National Insurance Act. Mr. Justice Bailhache dismissed the action with costs. Thereon the appeal followed.

After setting forth the general facts of the case, counsel for the plaintiff indicated the following as the questions to be determined: Was the resolution passed by the society illegal? If any illegality existed, could it be restrained by a court of law, or was the dispute between the plaintiff and the defendants one which ought to be settled by arbitration? He then set forth the law in regard to friendly societies. If they made rules or amended rules, they must register such rules or amendments with the Registrar of Friendly Societies. There was a penalty for not registering rules, but no penalty for not registering amendments. The rules of this particular society had been approved by the Insurance Commissioners, and one of them disentitled a member to sickness benefit unless he sent to the secretary of the society a declaration of incapacity for work in the form required and a medical certificate or other evidence of incapacity and the cause thereof. The society now purported to have amended that rule by the resolution in question, and this, counsel maintained, was illegal. The resolution imposed upon an insured person an obligation which was not an obligation allowed by the Insurance Act or by the rules. He submitted that an insured person might offer any sort of proof of sickness that he thought fit. No doubt in any particular case the society could say that the proof offered was not sufficient, but it had no right to lay down beforehand any arbitrary rule imposing a condition which was not allowed by the Act. Nor was the dispute one which should go to arbitration. There was a clear distinction between cases in which dispute arose as to the internal management of a society and those in which a member complained that the society had done something illegal or unconstitutional. The former cases the court ruled had to be matters for arbitration, but in respect of the latter it had allowed injunctions to be issued.

Counsel for the defendants said that the resolution was passed on the day on which the benefits of the Act came into operation, and was passed in consequence of a warning which the society had received from the Insurance Commissioners to the effect that they must not make out of the State funds any payments which were not authorized by the Act or by their rules. If they did so they would be surcharged on audit. The resolution consequently adopted was not a new rule, merely an instruction to an officer of the society. It contained nothing *ultra vires*, and any dispute regarding it was a dispute under Section 67 of the Insurance Act.

Junior counsel on both sides having further argued the matter, Lord Justice Vaughan Williams said that by the resolution in question the society had said that the only proof it would accept of the incapacity for work on the part of an insured person was a certificate signed by a panel doctor. In his opinion the society had no right to limit beforehand in such way the kind of evidence it would accept. In each case the society was bound, he thought, to consider the evidence of sickness offered, whether it was the certificate of a panel doctor or the certificate of any other qualified medical man, or whether, indeed, it was any other sufficient evidence of sickness. It was not disputed that there were cases in which an injunction might properly be obtained against a society, or that there were other cases in which an injunction ought not to be granted, the complainant being left to resort to arbitration; but the present case seemed to him one in which a friendly society was interfering with the rights of those entitled to its benefits, and he thought the court had the right and duty to prevent such *ultra vires* action. The matter at issue was whether it was a legal condition to the right of an insured person to receive sickness benefit that he should produce evidence of a particular kind—namely, the certificate of a panel doctor—or whether it was sufficient for him to produce any other kind of medical certificate. In his opinion such a question ought to be decided not by arbitration, but in the courts. He held that the resolution was illegal and *ultra vires*, and that the plaintiff was entitled to a declaration to that effect and to an injunction with costs both in the Appeal Court and in the court below.

The other two Judges of Appeal delivered judgement to the same effect, Lord Justice Hamilton, according to the *Morning Post*, stating that it seemed to him that the resolution was an attempted evasion of the rights of the plaintiff to get his compensation under the Act, and Mr. Justice Bray stating that the resolution was not, as was suggested, a mere instruction, but a new rule which sought to impose a very grave restriction on a member of the society in regard to the rights given him by the Act.

Earlier in the case Lord Justice Vaughan Williams asked counsel for the defendants whether it did not seem to him that it was contrary to natural justice that a man who was ill and who was attended by his own duly qualified doctor should nevertheless have to get a certificate from a panel doctor before he was paid sickness benefit.

The Services.

ROYAL ARMY MEDICAL CORPS.

THE King has granted permission to Captain William Byam, R.A.M.C., to accept and wear the Imperial Ottoman Order of the Medjidieh (Fourth Class) conferred upon him by the Khedive of Egypt in recognition of valuable services rendered.

INSURANCE ACT: CONTRIBUTIONS OF MEMBERS OF THE TERRITORIAL FORCE.

A MEMORIAL signed by some 150 members of the House of Commons has been presented to the Prime Minister and Colonel Seely suggesting that as an encouragement and as a help to members of the Territorial Force, the contributions required of them under the Insurance Act should be defrayed by the State. Colonel Seely, on receipt of the memorial, stated that the Government would give careful consideration to the proposal, and that it would be discussed with the Treasury authorities.

THE TRAINING OF THE SPECIAL RESERVE AND EPIDEMICS.

AT the meeting of the county council of Inverness, held on May 1st, Dr. Jno. Macdonald, the chief medical officer of health, called attention to a statement in a report by the district medical officer in North Uist to the effect that serious loss was occasioned through school closures and in other ways in the island by the introduction of diseases annually by the men attending the special reserve training, and suggesting that when an epidemic occurred in the battalion the men should be kept in quarantine long enough to make it certain that none of them would be carriers of infection. Dr. Macdonald suggested that in conjuction with Ross-shire a representation should be made

to the War Office regarding these matters. Cameron of Lochiel, who commands the Special Reserve Battalion of the Cameron Highlanders, and is a member of the county council, said that it would require a special Act of Parliament and a supplementary vote in the House of Commons to keep the battalion one day longer in camp than the date allowed for the closing of the training. He did not believe the county council would pass any resolution until the army medical authorities had an opportunity of replying to the accusations in the report, and suggested that the statement should be sent to the Principal Medical Officer of the Scottish Command for his remarks. This suggestion was adopted.

SIXTH LONDON FIELD AMBULANCE, R.A.M.C.(T.F.), SECOND LONDON DIVISION.

Two vacancies exist for a senior and junior officer in this unit. Applications should be addressed to the Officer Commanding, Duke of York's Head Quarters, Chelsea, S.W. Hours and days for attendance are so arranged that interference with private work is reduced to a minimum. Transfers from other corps can be arranged if deemed expedient. The vacancy for a junior officer would suit a member of the junior staff of a hospital, or a young medical man who is practising, or intends to practise, in the London District.

HIGHLAND FIELD MEDICAL UNITS.

It is now officially notified that the three Highland Division Field Medical Units, the 1st and 2nd Field Ambulances from Aberdeen and the 3rd Field Ambulance from Dundee, will undergo their annual training in camp at Boards, near Stirling.

INDIAN MEDICAL SERVICE.

The Government of India has sanctioned a limited number of officers of the Indian Medical Service, not exceeding four in a year, being attached, while on leave in the United Kingdom, to the staff for periods of one month each for the purpose of undergoing a course of training in medical work in the field and medical organization generally.

Universities and Colleges.

UNIVERSITY OF LONDON.

FACULTY OF MEDICINE.

At a meeting of the Faculty of Medicine, held at the University of London on Friday, May 2nd, Sir Alfred Pearce Gould, Dean of the Faculty, in the chair, Mr. H. J. Waring, M.S., was appointed to represent the Faculty on the Senate for the period 1913-17.

The constitution of the Board of the Faculty was approved as follows: Sir Alfred Pearce Gould, *Dean*; Dr. C. Wall, *Secretary*; Dr. Herringham, Professor Crossley, Dr. Eason, Sir Rickman Godlee, Dr. Graham Little, Dr. Senter, Professor J. H. Thomson, Professor Waller, Mr. H. J. Waring (members of the Faculty who are also members of the Senate). The chairmen of the following boards of studies: Preliminary Medical Studies, Professor Womack; Intermediate Medical Studies, Professor Halliburton; Advanced Medical Studies, Sir Francis Champneys; Hygiene and Public Health, Professor Kenwood; Physiology, Dr. Pembrey; Human Anatomy and Morphology, Professor Wright. Professor J. P. Hill and Mr. J. A. Gardner, nominated by the Board of Preliminary Medical Studies; Professor Parsons and another, nominated by the Board of Intermediate Studies; Dr. H. D. Rolleston, Mr. Stanley Boyd, Dr. Herbert Tilley, and Mr. S. G. Shattock, nominated by the Board of Advanced Medical Studies; and the following members appointed by the Faculty: Mr. Raymond Johnson, Mr. A. Macphail, Mrs. Scharlieb, Dr. T. W. Shore, Dr. T. G. Stevens, and Dr. H. Tooth.

The sum of £100 for advanced lectures in the Faculty of Medicine was allocated in the proportion of £35 to the Board of Intermediate Medical Studies, and £65 to the Board of Advanced Medical Studies.

The Faculty requested the Board of the Faculty to consider the position of the Faculty of Medicine in view of the publication of the report of the Royal Commission on the University of London, and to present a report.

KING'S COLLEGE.

The course of four lectures on the physiology of absorption to be given by Professor T. G. Brodie, F.R.S., will begin on May 28th, at 4.30 p.m., instead of May 21st, as originally proposed. The lectures, which will be continued on the three following Wednesdays at the same hour, are free to all medical students in London medical schools, to internal students of the University, and to medical men on presentation of their card.

VICTORIA UNIVERSITY OF MANCHESTER.

Appointments.

The following appointments have been made: Dr. C. P. Lapage to be Lecturer on Diseases of Children, Dr. G. H. Lancashire to be Lecturer on Skin Diseases, and Dr. N. William Ingalls to be a Research Fellow in Anatomy.

UNIVERSITY OF DURHAM.

Installation of Chancellor.

The Duke of Northumberland was on May 3rd installed Chancellor of the University by Sir George Hare Philipson, Vice-Chancellor.

After the newly elected Chancellor had given a short address a number of honorary degrees were conferred, including that of D.Sc., upon Sir Archibald Geikie, President of the Royal Society; Sir William Ramsay, K.C.B.; Sir T. Clifford Allbutt, K.C.B., Regius Professor of Physic at Cambridge; Sir J. A. Ewing, Director of Naval Education; Sir William Crookes, O.M.; Sir J. J. Thomson, O.M., Cavendish Professor of Experimental Physics at Cambridge; and Dr. E. B. Poulton, Hope Professor of Zoology at Oxford.

Afterwards a thanksgiving service was held in the cathedral, at which the Dean of Durham preached a sermon, in the course of which he said that the university owed its origin largely to Van Mildert, who, when Bishop of Durham, conceived the notion of appropriating some of the revenue of the cathedral for the establishment of a university in the north of England, where the first signs of the immense industrial development, which had since taken place, were becoming apparent. Durham thus shared with Oxford and Cambridge an ecclesiastical origin.

UNIVERSITY OF GLASGOW.

The following were among the degrees conferred at the spring graduation ceremony:

D.Sc.—Williamina Abel, M.D.Aberd.; G. H. Edington, M.D.Glas.
M.D.—*J. Taylor, A. R. Carmichael, J. H. Douglas.
M.B., C.M.—A. P. Aitken.
M.B., Ch.B.—*J. S. K. Boyd, †H. S. Banks, †W. C. Davidson, †W. M. Howells, †F. M. Robertson, †R. A. Barlow, Cecilia S. T. Anderson, Janet R. Anderson, W. L. Anderson, J. L. Brownlie, A. G. Buchanan, W. L. Cassells, J. Connel, R. Craig, W. E. Elliot, J. Fraser, W. Fraser, A. Glen, J. L. Gregory, J. M. Grier, D. M. Hunter, Jane K. M. Hunter, J. F. Hutton, T. P. Inglis, C. J. Kirk, Mary A. Kirk, P. A. M'Callum, J. M'Ghie, Margaret H. M'Killop, M. H. MacLeod, J. H. Magoveney, W. E. Maitland, W. Montgomery, J. M. B. Philip, Sarah A. J. Radkine, A. W. Russell, J. J. Sinclair, N. I. Sinclair, J. A. Smith, R. A. Steven, G. Taylor, E. G. Y. Thom, A. Walker, J. C. Watt, J. Whiteside, A. M. Young.

* With honours. † With commendation.

On the same occasion the following prizes were also handed to the winners of the competitions involved: The Arnott Prize for Physiological Physics, J. W. Moffat; the Bellahouston gold medals for eminent merit in a thesis, J. S. Dunn, W. Golmour, Ivy M'Kenzie; the Asher Asher gold medal for laryngology and rhinology, D. K. Adams.

Inclusive Fees.

At the statutory half-yearly meeting of the General Council of Glasgow University, held on April 30th, a report was submitted from the Business Committee dealing with the representations made to the University Court on the subject of inclusive fees in medicine and applied science. The report stated that the circumstances had been considerably altered, for the Treasury had agreed to make the full grant for this year. The Committee adhered to the view that sufficient experience of the working and effect of an inclusive fee in other faculties had not been gained to warrant its adoption in the difficult case of medicine, and that an inclusive fee in medicine would exercise an adverse influence on extramural teaching.

Public Health AND POOR LAW MEDICAL SERVICES.

MEDICAL INSPECTION OF CHILDREN IN SCOTLAND.

The Committee of Council on Education in Scotland has issued a minute requiring that the medical inspection of children in schools within the area of every school board shall be conducted in accordance with the regulations embodied in the department's memorandum on the medical inspection and supervision of school children, bearing date March 31st, 1909; and also, that in cases where such inspection is not provided for under a scheme approved under Section 17 (6) of the Education (Scotland) Act, 1908, it should be conducted by a medical practioner who (*a*) holds the diploma in public health or possesses other qualifications which are accepted by the department as equivalent thereto; and (*b*) is not engaged in private practice; but that nothing in the minute shall prejudice the right of any school board to institute a supplementary scheme of medical inspection for the children attending schools within their district, provided that any such supplementary scheme has been submitted beforehand to the department for approval.

HEAVY FINE FOR MILK ADULTERATION.

Last week, in the Dublin Southern Police Court, a woman was summoned for selling milk adulterated with 28 per cent. of water. It was mentioned that there were several previous convictions against her, and that she had been fined £25 on the last occasion. The magistrate said he would now impose a fine of £100, to be reduced to £10 if the woman, who is old and in feeble health, discontinued the business within three months.

Medical News.

SIR LAUDER BRUNTON has been elected an honorary member of the Imperial-Royal Medical Society of Vienna.

THE Congress of the Alliance of Social Hygiene will be held in Paris (5, rue Las Cases) on May 14th and 15th.

THE Master and Wardens of the Society of Apothecaries have issued invitations to a conversazione on Friday, May 23rd.

THE house of the Royal Society of Medicine will be closed for Whitsuntide from Saturday, May 10th, to Tuesday, May 13th, both days inclusive.

DR. R. PRICHARD, M.O.H. Llandaff and Dinas Powis Rural District, has been granted an increase of salary of £50 per annum in view of additional work imposed by recent legislation.

MISS N. M. BASCHMAKOWA, of St. Petersburg, the oldest sister of the Red Cross in Russia, who worked under Pirogoff in the Crimean war, has recently died at the age of 103.

H.R.H. PRINCESS CHRISTIAN OF SCHLESWIG-HOLSTEIN will lay the foundation-stone of the Helena Building (new out-patient department), Royal Free Hospital, on Monday, May 19th, at 2.45 p.m.

THE Durham University Medical Graduates' Association will hold a dinner at the Criterion Restaurant, Piccadilly Circus, on Friday, May 30th, when the President, Dr. F. Edridge-Green, will take the chair.

DR. ALEXIS CARREL, well known for his experiments on the survival of tissues and other researches, for which last year he was awarded the Nobel prize in medicine, has been made a Knight of the Royal Order of Isabella the Catholic by the King of Spain.

THE annual oration before the Medical Society of London will be delivered by Sir William Whitla, M.D., on Monday evening, May 26th; the subject will be recent advances in therapeutics. Subsequently a smoking conversazione will be held.

THE sixth International Dental Congress will be held in London in August (3rd to 8th), 1914, under the patronage of His Majesty the King. The President of the Congress will be Mr. J. Howard Mummery, and the joint General Secretaries are Mr. Norman G. Bennett and Mr. H. R. F. Brooks. Mr. H. Baldwin is Honorary Treasurer. The offices of the Congress are at 19, Hanover Square, London, W., to which address all communications should be sent.

THE Central Committee for Medical Post-graduate Education in Prussia has arranged a series of medical courses, including all branches, to be given from June 19th to June 28th. The course is primarily intended for German practitioners, but foreign physicians will be admitted at a higher fee as far as space permits. Further particulars can be obtained from the Bureau of the Kaiserin Friedrich-Haus at Berlin, N.W. 6, Luisenplatz 2–4.

THE usual Friday evening discourse at the Royal Institution was given last week by Mr. H. G. Plimmer, who gave his audience a rapid birdseye view of the whole field of blood parasites, and, as he modestly suggested, gave them at least some idea of its extent and of the great gaps which still await the investigator's spade. He did not attempt to follow a biological order, but dealt first with the blood parasites which live in the plasma and those which enter the corpuscles. The address was very fully illustrated by lantern slides.

THE Hunterian Society's medal, awarded this year to Dr. Graham-Stewart, of Margate, was presented to him at a meeting on April 23rd. On the same occasion he read an abstract from the essay for which the medal was awarded. It dealt with hyperpiesis, and urged the desirability of measuring the blood pressure in all cases of illness. A theory of autoinoculation was put forward in regard to etiology, and it was contended that the common belief that digitalis should never be administered to persons whose blood pressure was high was ill founded. Since digitalis was incapable of raising pressure which was already high, its use was legitimate if other symptoms in the case called for its employment.

AT a meeting held at the house of Dr. Clement Cleveland of Philadelphia on April 22nd it was decided to organize a national anticancer association and to begin a campaign of education as to the means to be adopted for the prevention of cancer. An organizing committee was appointed. The main object of the association is to educate the public to recognize the early symptoms of the disease by means of magazine articles, leaflets distributed through boards of health, social workers and women's clubs, special instruction in nurses' training schools, and public lectures. The campaign of education is addressed chiefly to women. Two committees already appointed for the consideration of such an organization were represented at the meeting, one formed at the annual meeting of the American Gynaecological Society in May, 1912, the other at the surgical congress held in September.

THE Historical Medical Museum, organized by Mr. Henry S. Wellcome, to which reference was made in a recent issue of the BRITISH MEDICAL JOURNAL, is to be opened in London towards the end of June. Mention has already been made of some interesting exhibits. Among the others there will be a large collection of the original apparatus used by Galvani in his first experiments. Ancient microscopes and optical instruments, gathered from all quarters of Europe, will form another feature, and a selection of surgical instruments used by famous surgeons when operating on historical personages is promised. A large collection of votive offerings will also be exhibited; it will include Graeco-Roman *ex-votos* in silver, bronze, marble, and terra cotta, together with a number of similar objects used to express thanksgiving for recovered health in the Middle Ages and in modern times. A number of amulets and charms used in English folk-medicine will also be shown. A collection of early medical medals and coins from the Graeco-Roman period, ancient manuscripts, and early printed medical books will also be exhibited.

THE second Guildhall School Conference of the Food Reform League will be held on June 30th and July 1st. The opening session will be devoted to a discussion of papers on the working of the English and Scottish Acts governing the provision of meals for necessitous school children. At the second the educational aspect of the problem, the meals of country school children, and the relation of school and home will be considered. The morning of July 1st will be taken up with a discussion of the teaching in public elementary schools of personal hygiene, food values, catering and cookery, while the concluding session will be devoted to the consideration of diet, cookery, and hygiene in day and residential institutions for children and adolescents, both public and philanthropic, including open-air and special schools, reformatories, industrial schools, and Poor Law institutions. Full particulars will be sent to any one forwarding a stamped addressed envelope to the Secretary, National Food Reform Association, 178, St. Stephen's House, Westminster.

A DINNER of the Brussels Medical Graduates' Association, in connexion with the forthcoming congress in Paris of the Royal Institute of Public Health, was held at the Trocadero, London, on April 22nd. In the unavoidable absence of the president, Dr. Arthur Haydon took the chair, and, after the usual loyal toasts, gave the toast of "The Visitors." The object of the dinner, he said, was to bring together the members who were interested in the Paris Congress, and to appoint delegates to represent the association. If possible, he hoped to be able to organize another river party next July, on the same lines as the successful party last year. The association was making good progress, and quite a large number of candidates were working for the degree, both at home and abroad. Dr. Ettles then proposed the toast of the "Brussels Medical Graduates' Association," and Dr. James Metcalfe suitably responded. The following were elected officers for the year: President, Dr. Harold S. Sington; vice-president, Dr. Howard Humphris; honorary treasurer, Dr. Major Greenwood; honorary secretary, Dr. Arthur Haydon; Members of council, Drs. Wilkinson, Callender, Smallwood, Fielden Briggs, Dutch, Bryce Macaulay, Bruce-Porter, Robinson, and Gibbon.

THE third of the Chadwick lectures by Dr. J. T. C. Nash was read for him by Professor R. T. Hewlett, the author being unfortunately still indisposed. In this lecture the consideration of the evolution of epidemics, of which an account appeared in our issue for April 12th, was concluded by a discussion of the question of whether pathogenic micro-organisms are not only specific but immutable in structure and powers. He concluded that this was not the case, and that, like the higher organisms, bacteria were likely to be affected by their environment. Hence the conclusion was drawn that to combat pestilences successfully the measures taken must be aimed at the common environment alike of mankind and of pathogenic organisms, improving it for the former, rendering it less favourable for the latter. This conception involved direct sanitation such as the destruction of vermin, purification of water, and the prevention of contact between the defective and the sound, and justified the "sanitary idea" of Chadwick, Richardson, Alfred Carpenter, and other of the older pioneers of the science of public health.

Letters, Notes, and Answers.

Authors desiring reprints of their articles published in the British Medical Journal are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

Correspondents who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

Telegraphic Address.—The telegraphic address of the EDITOR of the British Medical Journal is *Aitiology, Westrand, London*. The telegraphic address of the British Medical Journal is *Articulate, Westrand, London*.

Telephone (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* British Medical Journal *are devoted will be found under their respective headings.*

QUERIES.

Paralysis Agitans.

G. F. P. asks for advice or references which would help him in treating a case of paralysis agitans in an elderly lady in whom the constant flow of saliva is a distressing symptom.

LETTERS, NOTES, ETC.

The Treatment of Liver Abscess by Injections of Emetine.

Major F. J. W. Porter, D.S.O., R.A.M.C., writes: I have recently treated a native of Hyderabad, Deccan, by injections of emetine. There was a definite history of a liver abscess, which had burrowed into the right lobe about a month before I saw him. Physical signs of consolidation and softening were present, and there was much wasting. The temperature ranged between 101° and 103°. Expectoration (containing typical liver pus) was about 2½ pints in the twenty-four hours. Within three days the temperature was normal, and the amount of expectoration was only half a pint. There was no pain in the chest after the first day. Convalescence was very rapid, and there has been no relapse. Nine injections were given in all; and the remedy acted like a charm.

Herpes Zoster and Varicella.

Dr. B. Jones (Boscombe) writes: In the Epitome of January 11th there is an annotation anent "Herpes Zoster and Varicella" in which particulars are given of many cases of shingles being followed by chicken-pox in other members of the family about a fortnight after the shingles appeared in the first patient. In *Guy's Hospital Gazette* of Saturday last there is a further case, reported from Rhodesia, of this disease followed after a fortnight by three cases of chicken-pox in the family. As the affected house was three miles from the nearest farm and nine miles from a railway station and every inquiry failed to discover any possible source of infection, the matter is certainly very curious. Years ago, when medical officer to a workhouse, I was frequently puzzled by the causation of shingles which occurred from time to time, generally in twos or threes, but did not give much thought to what was always, in my experience, in young people a trifling disorder. I have nothing to add to the subject, but it is one of those cases worth noting.

Is Tuberculin a Failure?

Dr. J. Reid (London, W.C.) writes: In 1884 I had occasion to make a *post-mortem* examination on a young man in a room lighted with one candle, where there was a very limited supply of water. Both lungs were full of cavities, hard. I accidentally cut two fingers with a scalpel. The cuts were on the back of the fingers, on the second phalanges of the left hand. I treated both alike, but one became erysipelatous and healed in a few days, although it gave me a great deal of pain. The other refused to heal under compresses and various germicides, including corrosive sublimate. In about six weeks I used balsam of Peru—it was then still troublesome and ulcerating—and it healed speedily. A writer in the Journal proposes experiments with pneumococcus and tubercle. If he looks round he will find many in man, which recover and leave the tubercle to run its course. I am now in good health in spite of the tubercle inoculation.

Rheumatoid Arthritis.

Dr. Lionel Calthrop (Woodhall Spa), writes: The fact that it is possible for two such teachers and leading men in our profession as Sir James Barr and Dr. Luff to differ so widely both as to the etiology, pathology, and treatment of so important a disease as rheumatoid arthritis, as shown by their articles and correspondonce, must inevitably cause confusion in the mind of the rank and file. One hoped that we were gradually approaching more precise and reliable knowledge on the subject, but apparently this is not so. Has not the time now arrived when it is advisable that a representative committee should be formed thoroughly to investigate all the points at issue and at least report for the guidance of the profession as to which of the many methods of treatment now in vogue produces the most successful results?

Decimal Weights and Measures.

The annual report of the Decimal Association contains a good deal of encouragement for those who are anxious to see the British practice of returning weights and measures in all kinds of ancient terms replaced by the decimal or metric system. The fact that the General Medical Council has decided to employ the metric system in the next issue of the *Pharmacopoeia* has attracted considerable attention, and the gem dealers of London are now agitating for the introduction of an official metric carat. In South Africa likewise matters are trending in the same direction. The Union Government introduced last year a bill for the consolidation of the various acts of the four States relating to weights and measures, and in the schedule to this bill the metric system was adopted. The bill did not reach a second reading last year, but it is not anticipated that when reintroduced there will be any serious opposition. In Malta an Ordinance on the subject was promulgated in 1911, and, when it comes into operation next year, will have the effect of rendering the metric system compulsory in commerce. Russia is the only European country besides the United Kingdom in which the decimal is not the sole official standard; the decimal system is there used, among others, and the Duma has now passed legislation which will encourage its use. In China also there appears to be a strong disposition towards the introduction of the metric system as one of the outcomes of general reform. The Advisory Council has passed a measure on the subject, and the Government proposes to send Commissioners to all the provinces to arrange tables for the conversion of the old weights and measures into those of the decimal system. If and when this reform takes place it will be a matter of considerable importance to this country, more especially when it is taken in conjunction with the fact that in the kingdom of Siam a metric system is also now in use. One of the arguments which principally led to the rejection of the Decimal Bill introduced in the House of Commons in 1907 was that the Lancashire cotton manufacturers and merchants would suffer if they were forced to adopt a metric system, because the conservatism of their customers in the Far East was so great that they would regard any change in the dimensions of the fabrics offered to them with extreme suspicion. If native merchants in the Middle East were themselves obliged to use decimal measures, and thus became accustomed to them, arguments of this character would lose their force. Though the main arguments in favour of the general adoption of the decimal system are commercial, it might be contended also that if a child can be rendered fit to conduct the ordinary business transactions of life without being forced to learn a confusing series of tables of weights and measures it would have more time to learn other subjects. The offices of the Decimal Association are at Finsbury Court, Finsbury Pavement, E.C.

Warnings.

A man, presenting the appearance of a workman—brown hair, thick set, 6 ft. in height—wearing a suit of dark material, called recently on a medical man; when asked for his insurance card he said that he was not insured. In payment of the fee he placed what appeared to be half a sovereign on the writing table. We are informed that a person answering this description is wanted by the police at Willesden Green, N.W., for passing counterfeit coin.

There is reason to believe that an individual is now visiting medical men in London and seeking from them monetary assistance. He has stated that he was an American medical man stranded in London, and so hard up that he had had no food for hours. He has produced a copy of a telegram addressed to a person of position in America, asking for the remission of funds, and stated that pending their receipt he required a little assistance. He has also alleged that he has just been discharged from a certain hospital in London after a serious operation. One medical man to whom he applied investigated this particular point, and could find no evidence that it was true. The individual in question was sturdily built, about 5 ft. 3 in. high, clean shaven, and had curly hair, and there was evidence that he was a heavy smoker. His general appearance suggested a Jewish origin.

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